DOCUMENT RESUME

ED 411 070 PS 025 743

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TITLE Promoting Self-Esteem in a Caring Positive Classroom.
PUB DATE 1997-05-00
NOTE 92p.; Master's Action Research Project, Saint Xavier University & IRI/Skylight.
PUB TYPE Dissertations/Theses (040) -- Reports - Descriptive (141)
EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Academic Achievement; Biological Sciences; Class Activities; *Classroom Environment; Elementary School Students; Intermediate Grades; Interpersonal Competence; Junior High School Students; Junior High Schools; *Peer Relationship; Physical Education; *Self Esteem; Student Participation; *Teacher Student Relationship

ABSTRACT

Noting that low self-esteem negatively affects student achievement, this action research project implemented and evaluated a program for increasing student self-esteem through a caring and positive classroom environment incorporating cooperative learning and the use of praise and rewards. The targeted population consisted of fifth grade physical education students and seventh grade life science students in an elementary school near a large midwestern city. The impact of low self-esteem on classroom achievement was documented by teacher anecdotal records on class participation, teacher journal entries describing student behavior, student reflection journal entries that described feelings and self-esteem, and self-concept assessment tools. Three areas of intervention were determined: a positive relationship between student and teacher, positive interaction among peers, and a positive and caring classroom environment. Cooperative groups were used to increase appropriate social skills and foster peer relationships. Post intervention data indicated an increase in positive self-esteem, greater student engagement in class activities, and increased achievement levels. The participation checklist for physical education, modified Florida key evaluation form, and classroom signs are appended. (JPB)

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PROMOTING SELF-ESTEEM IN A CARING POSITIVE CLASSROOM

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An Action Research Project Submitted to the Graduate Faculty of the School of Education in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Teaching and Leadership

Saint Xavier University & IRI/Skylight
Field-Based Masters Program
Chicago, Illinois

May, 1997

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Abstract

This report described a program for increasing student self-esteem through a caring and positive classroom environment incorporating the use of praise and rewards and cooperative learning. The targeted population consisted of fifth grade physical education students and seventh grade life science students in an elementary school located in an older established community west of a large Midwestern metropolitan city. The problem of low self-esteem on classroom achievement has been documented by teacher anecdotal records on class participation, teacher journal entries describing student behavior, student reflection journal entries that describe feelings and self-esteem and self-concept assessment tools.

Analysis of probable cause data revealed that self-esteem impacts student achievement. It has been reported that low self-esteem impacts student achievement negatively and favorable self-esteem impacts student achievement positively. The student's upbringing, initial school experiences, physical and mental changes during middle school years and the school environment all play a significant role in the development of the student's self-esteem. The one aspect we controlled as teacher researchers was the classroom environment.

A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem setting suggested the selection of three possible major areas of intervention: a positive relationship between student and teacher, positive interaction among peers and a positive and caring classroom environment. This was accomplished by the use of praise and rewards given to the student. Cooperative groups were used to increase appropriate social skills and foster peer relationships. Both of these interventions contributed to creating a caring and positive classroom setting.

Post intervention data indicated an increase in positive self-esteem. Students now are more engaged in class activities and have increased achievement levels.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

Problem Statement

The targeted students for this study are fifth grade physical education students and seventh grade life science students who have low self-esteem/self-concept impacting their class achievement. Evidence of the problem is documented by teacher anecdotal records on class participation, teacher journal entries that describe student behavior, student reflection journal entries that describe feelings and self-esteem, self-concept assessment tools.

School

This study will be conducted in a Pre-kindergarten through eighth grade school with an enrollment of 644 students located west of a large midwestern metropolitan city. Of this population 6.2% come from low income households. The ethnic makeup of the school population is 88.7% Caucasian, 9.5% Hispanic, 1.7% Asian/Pacific Islander and .2% African American; 8.2% are eligible and serviced in bi-lingual education. This school has an average daily attendance pattern of 95.2% with a 13.1% student mobility rate (Illinois State School Report Card, 1996).

A staff of 40 teachers is employed with a gender breakdown of 92.4% female, 7.6% male and an ethnic breakdown of 97.5% Caucasian and 2.5% Hispanic. The average years of teaching experience are

10.4 years. Fifty-eight and three tenths percent hold a Bachelor of Arts degree and 41.7% hold a Master's degree or above. The average teacher salary in this district is $31,522.00. The teacher to student ratio is 1 to 18.5 (Illinois State School Report Card, 1996).

District

This is a one school school district headed by three administrators with an average salary of $57,167.00. Operating expenditure per student is $4,885.00. Average class size is 20.9 students with 98.1% of the parents meeting with their child's teacher at least once per year. The following services/classes are offered: social work, speech, Title I mathematics/reading, Transitional Program of Instruction(TPI) and enrichment programs. The Regular Education Initiative(REI) has increased the number of children identified with special needs in the regular classroom. To help meet the needs of these children self-contained special education classrooms, resource and team teaching in the regular classroom exist in this school. Along with the traditional curriculum additional subjects include: art, music, computer and organized physical education classes. Student scores on the Illinois Goal Assessment Program(IGAP) tests are above the state average in each of the 13 areas tested. In 11 of the 13 areas 85% of the students meet or exceed the state goals. In order to maintain and improve educational standards the staff is involved in the School Improvement Plan(SIP) for the state of Illinois (Illinois State School Report Card, 1996).

Community

This older established community consists of 9,953 people. The socioeconomic makeup of the community is basically middle-

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class with an average per capita income of $37,528.00 ranking it 169th out of 262 in a six county area. The educational level of the population is as follows: 64.7% have completed high school, 27.8% have a college degree and 5.5% have not attained a high school diploma. The school's Parent Teacher Association has a membership of 499 members with 100% staff membership. In the Spring of 1995, the district was successful in passing a referendum which showed support for the school and allowed the existing programs to remain in place. It will also provide for future growth into the twenty-first century. The area of 2.5 square miles, is mainly residential with a low industrial base. The average purchase cost of a home is $115,000.00 with property taxes of $1,000.00. The racial makeup of the community is 92.9% Caucasian, 4.5% Hispanic, 0.1% African American and 2.5% Other. The median age of the residents is 38.8 years (Community Directory, 1995). Public transportation makes this community easily accessible.

National Context of the Problem

Research evidence shows that there is a significant and perpetual relationship between self-concept and achievement (Purkey, 1970). "For generations, wise teachers have sensed the significant and positive relationship between a student's concept of himself and his performance in school" (Purkey, 1970,p.14). Students are most likely to succeed if they feel good about themselves and their abilities. If, however, they see themselves and their abilities in a negative fashion they usually fail to achieve good grades (Purkey, 1970).

According to Johnson (as cited in Krupp, 1992), a cycle exists in which positive self-esteem creates more positive self-

feelings. Conversely, low self-esteem results in additional negative self-feeling. Feelings of sadness, depression, anger and incompetence are present in an individual with low self-esteem. These students avoid taking risks, do not ask questions and wait for others to come to them whereby hindering their achievement. Negative thoughts and feelings are reinforced and the cycle repeats itself (Krupp,1992).

Dr. Larry Dorrell goes further in his assessment of the problem. His findings reveal that students with low self-esteem do not have the support systems in place to believe in themselves; therefore, they are unable to take chances and venture out where they have not gone before. These types of students limit their possibilities by being afraid to try (Dorrell, 1991). Nathaniel Branden's research agrees with this assessment. His findings indicates that students with low self-esteem seek the safety of the "familiar and undemanding" which in turn acts to further weaken their self-esteem (Branden, 1990, p.6). Students with a good sense of self-esteem will take risks (Krupp, 1992). Nothing great or even average can be accomplished without risks (Dorrell, 1991). In Dorrell's opinion, "the greatest failure in life is not to have tried at all" (Dorrell, 1991, p.11).

Stanley and Purkey suggest that people perceive themselves as they are treated in their interactions with others. If students feel able or unable in the classroom it is because they have already developed perceptions of themselves in the classroom. Students develop confidence as learners when they perceive their efforts as being successful. The opposite holds true if they perceive their efforts as being unsuccessful (Purkey and Stanley, 1991).

Self-esteem provides people a solid foundation with which to face the problems of life (Combs, Avila and Purkey, 1970). When people's self-esteem is low, their resilience to face life's problems is diminished. They weaken before changes that a healthier sense of self could handle (Branden, 1990). With a positive view of self they can confront the world and it's challenges (Combs, Avila and Purkey, 1970).

The evidence documented by the above researchers indicate that low self-esteem impacts achievement. Students with low self-esteem are caught in a cycle in which negative perceptions of their ability fosters the formation of additional negative feelings. Students' possibilities and achievement are limited by their inability to take risks and face the challenges of life. Dorrell (1991) sums up the problem of students' low self-esteem impacting their achievement by quoting the following lines from "The Rose:"

> It's the heart afraid of breaking that never learns to dance.
> It's the dream afraid of wakening that never takes the chance.
> It's the one who won't be taken, who can not seem to give.
> And the soul afraid of dying that never learns to live.
> (Dorrell, 1991, p.9)

CHAPTER 2

PROBLEM EVIDENCE AND PROBABLE CAUSE

Problem Evidence

The students of the fifth grade physical education and seventh grade science classes used for this study scored within the average range for positive self-esteem when given the *Piers-Harris Children's Self-Concept Scale*, a self-report inventory. The target group of students at each level scored lower than the total group and random sample group but still within the average range. Given these results, the teacher/researchers do not consider the students to have a problem with self-esteem but will determine if implementing strategies to create a caring and positive classroom environment will enhance student self-esteem and increase achievement especially within the target group.

In order to determine the baseline average of self-esteem in the fifth grade physical education and seventh grade science classes, two groups per grade level were selected. One group was composed of six students per grade level chosen indiscriminately to make up a random sample group. The physical education class's random sample group was selected by pulling six names out of a hat containing the names of students in class. The random sample group for science was selected by including the students who were on the second and fourth line in the gradebook for each of the three sections of seventh grade science.

The second group per grade level was composed of six students selected by the teacher/researcher after observation during the first six weeks of school. This group will be referred to as the target group. A checklist noting class participation was used in fifth grade physical education to select students who did not willingly engage in activities. The teacher/researcher met with the fourth grade teachers to obtain additional information concerning the class participation and skill levels for these students during the previous school year. Six students were selected on the basis of the combined information. These students displayed low levels of class participation and fitness and skills achievement. The selection of students for the science target group was based on the rate of homework completion and grade average. The six students selected had the greatest number of late or missing assignments and a below average grade on the mid-term report.

Documentation of the level of self-esteem for the students selected for the random sample and target groups for both physical education and science was needed. The Florida Key, a tool which provides the teacher with insights into how students view themselves in relation to school without the students awareness, was completed on a weekly basis for four weeks prior to the intervention period. Teacher comments, equivalent to a journal entry, were added to the Florida Key as deemed appropriate.

The Florida Key is an instrument used to infer the students' self-concept as a learner. It identifies selected behaviors of students who seem to possess positive self-concepts in the area of school success (Purkey, Cage & Fahey, 1973). The Florida Key does not depend on self-report and is nonreactive. Purkey stated that

the "KEY is a valuable instrument in assisting the teacher to examine the positive and persistent relationship between specific aspects of a student's self-concept and success or failure at school" (1973, p.9).

The Florida Key is composed of 23 questions that describe student behaviors, behaviors that occur more often in students who have a good self-concept as learner (Purkey, et al., 1973). These questions are grouped into four factors. The first factor is labeled Relating. High scores in this area indicate close identification with classmates, teacher and school by these students. Scores below nine are in the low range. The second factor is Asserting. The students scoring high in this area tend to trust in their value, voice their opinions and are confident in their interactions with authority figures. Scores below six are in the low range for Asserting. Investing is the third factor assessed. Students willing to risk failure or ridicule when trying something new score high is this area. These are also the students willing to volunteer in class. Scores below eleven are in the low range. The final factor, Coping, is defined by Purkey as trust in one's own academic ability. The student who scores high is interested, involved and takes pride in what happens in the classroom. Scores under eleven are low for the factor of Coping.

The tables on the following pages show group average scores for the Florida Key. Each table is followed by an interpretation and analysis of this information.

Table 1

Florida Key

Fifth Grade Physical Education

Random Sample Group

Factor	Average Score
Total Score	70 out of 115
Relating	18 out of 25
Asserting	17 out of 20
Investing	26 out of 35
Coping	25 out of 35

Table 1 shows the average total score for the fifth grade physical education class's random sample group is 70 points, placing them in the moderate range for positive self-concept. The average scores for all the factors, Relating, Asserting, Investing and Coping put the students in the high range for these factors with average scores of 18,17, 26 and 25 points respectively.

Table 2

Florida Key

Fifth Grade Physical Education

Target Sample

Factor	Average Score
Total Score	53 out of 115
Relating	21 out of 25
Asserting	11 out of 20
Investing	23 out of 35
Coping	4 out of 35

Table 2 shows that the students in the fifth grade physical education target group scored in the moderate range with an average total score of 53 points. The score for the factor Relating is in the high range with an average score of 21. The average score for the factors Asserting and Investing are in the

moderate range with scores of 11 and 23 respectively. The target group scored in the low range with an average score of four points for the factor, Coping.

Table 3

Florida Key Comparison Graph

Fifth Grade Physical Education

Random Sample Group and Target Group

Area Identified	Random Sample Group %	Target Group %
Total Score	61	46
Relating	72	84
Asserting	85	55
Investing	74	66
Coping	71	11

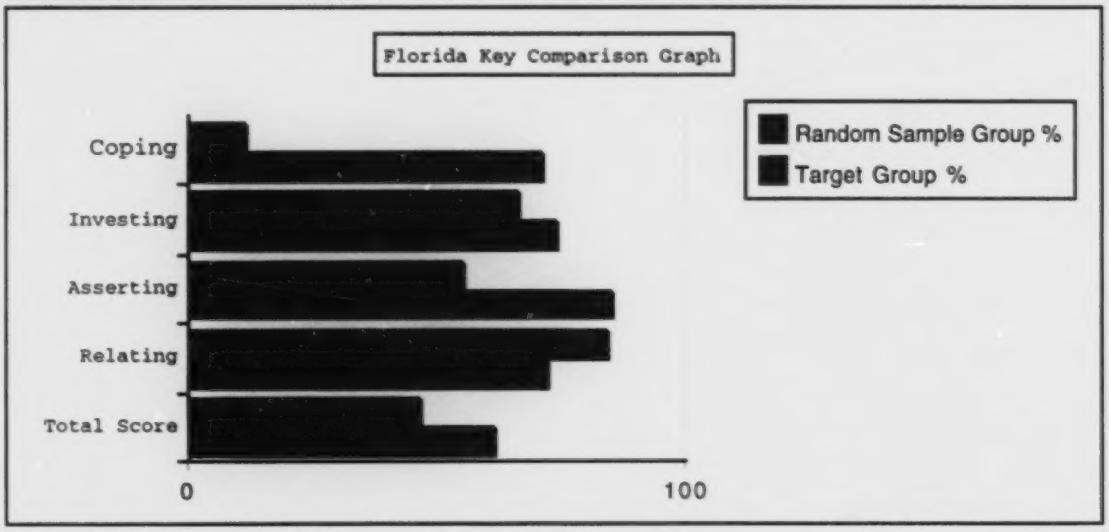

Figure 1 Comparison Graph for the Florida Key - Physical Education

Figure 1 shows the comparison of data for the Random Sample and Target Groups on the Florida Key. In Table 3 the average total score for the fifth grade physical education class's Random Sample Group and Target Group show that both groups scored in the moderate range. The Random Sample Group scored 70 points while the Target Group scored 53 points. All of the Random Sample Group's

average scores fell in the high range for positive self-concept. The Target Group's score in the relating factor scored in the high range, the Asserting and Investing factors' average scores fell into the moderate range while the Coping factor fell into the low range.

Table 4

Florida Key

Seventh Grade Science

Random Sample Group

Factor	Average Score
Total Score	67 out of 115 points
Relating	18 out of 25 points
Asserting	11 out of 20 points
Coping	24 out of 35 points
Investing	14 out of 35 points

The average scores for the Random Sample Group in seventh grade science, as shown in Table 4, all indicate positive self-concept in regard to themselves as learners. The scores for the factors of Asserting, Coping and Investing all are within the moderate range. This group scored high for the factor Relating, indicating that these students probably identify closely with classmates, teachers and the school (Purkey, et al., 1973).

Table 5

Florida Key

Seventh Grade Science

Target Group

Factor	Average Score
Total Score	48 out of 115 points
Relating	14 out of 25 points
Asserting	7 out of 20 points
Coping	16 out of 35 points
Investing	12 out of 35 points

The Target Group's average scores for all factors in the Florida Key are within the moderate range for self-concept as shown in Table 5. The score for the factor Asserting, however is at the lower limit of the moderate range indicating that these students are less likely to speak in front of a class, speak up for their ideas or ask questions in class (Purkey, et al., 1973).

Table 6 and Figure 2, on the following page, compare the average scores for the Random Sample Group with the average scores for the Target Group in seventh grade science. The average total score and factor scores for both groups, on the Florida Key, are all within the moderate range for positive self-concept as a learner. According to this data, the students in the Target Group, although scoring within the moderate range, did score lower than the Random Sample Group. Therefore they are less likely to identify closely with their classmates and teachers in comparison to students in the Random Sample Group. The Target Group students are also less likely to trust their ability and risk failure in front of the class compared to the Random Sample Group students (Purkey, et al., 1973).

Table 6

Florida Key Comparison Graph

Seventh Grade Science

Random Sample Group and Target Group

Areas Scored	Random Sample Group %	Target Group %
Total	58	42
Relating	72	56
Asserting	55	35
Investing	68	46
Coping	40	34

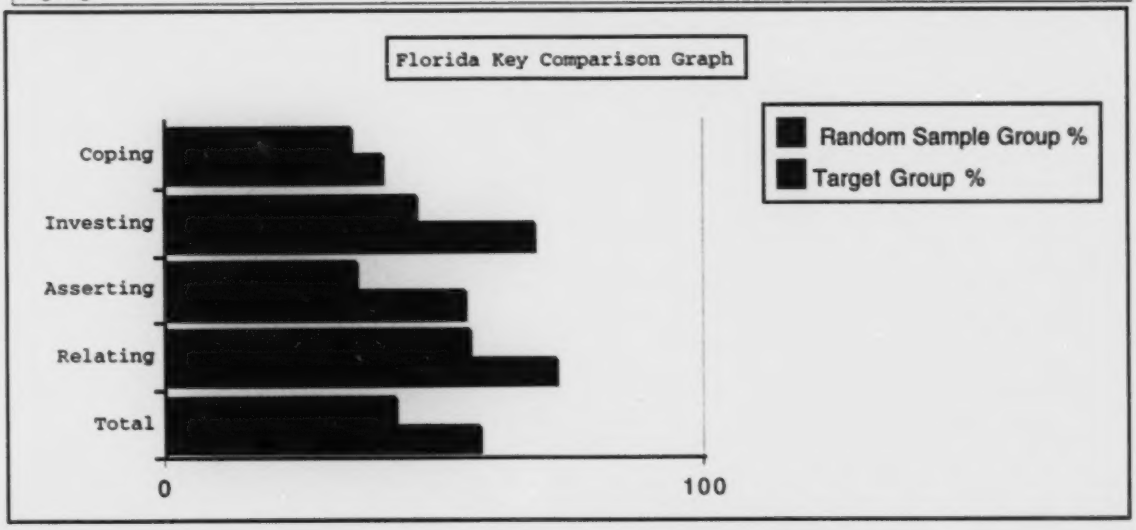

Figure 2 Comparison Graph for the Florida Key - Science

The data collected over the six week period did confirm a difference between the groups in the level of self-concept as a learner. In both the physical education class and the science class the Target Group's level of self-concept as a learner was lower than the level in the Random Sample Group. Purkey (1973) states the importance of determining the learner self-concept of students when he states the following, "The KEY is a valuable instrument in assisting the teacher to examine the positive and

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persistent relationship between specific aspects of a students' self-concept and success or failure at school" (p.9).

The final step in baseline documentation of self-esteem was the administration of the *Piers-Harris Children's Self-Concept Scale* (*Piers-Harris*). This self-inventory is designed to assess how children and adolescents feel about themselves. The terms self-concept and self-esteem are interchangeable in this inventory (Piers, 1988). "The *Piers-Harris* focuses on children's conscious self-perception, rather than attempting to infer how they feel about themselves from their behaviors or attributions of others"(Piers, 1988, p.1). Eighty statements indicating how some people feel about themselves are shown to the children. The children are to indicate whether each statement applies to them by giving a response of yes or no. The total raw score has a possible range of 0 to 80 reflecting the number of individual items which have a response in the direction of positive self-concept. A high total raw score, therefore, indicates a favorable self-concept, whereas a low total raw score indicates a lower self-concept. Another area of interpretation on the *Piers-Harris* uses the cluster scales. Since children are not characterized by one overall view of themselves but across different areas, these areas may be used to identify areas of relative strengths and weaknesses in children (Piers, 1988).

The most reliable measure for the *Piers-Harris*, and the score best supported by research, is the total score. In the school setting users are most familiar with percentile scores. Therefore, the total raw scores have been transformed into percentile scores in the following charts. "These scores reflect the percentage of individuals in the normative sample who scored lower than the

child whose scores are being evaluated" (Piers, 1988, p. 37). The scores used in this study reflect the average of each represented group; therefore no individual student's score has been used. Scores between the 31st and the 70th percentiles are considered to be average. Percentile scores of 16 percent to 31 percent are considered low average. Scores of 31 percent to 50 percent are considered average. Scores above 50 percent are considered high average (Piers, 1988). This applies to total scores and cluster scores.

Six clusters are present in the *Piers Harris Children's Self-Concept Scale*, four of which will be reported in this study. Cluster I is the cluster labeled Behavior. "This 16-item cluster reflects the extent to which the child admits or denies problematic behavior" (Piers, 1988, p.38). Scores below the 16th percentile suggests acknowledged behavioral difficulties. Cluster II, Intellectual and School Status, contains 17 items which reflect the students' self-assessment of their abilities with respect to intellectual and academic tasks, including general satisfaction with school and future expectations. Scores below the 16th percentile suggest difficulties with school related tasks. Cluster IV, Anxiety, reflect general emotions such as worry, nervousness, shyness and a general feeling of being left out of things. Scores below the 16th percentile indicate a possible need to address the child's concerns. Cluster VI, Happiness and Satisfaction, contain 10 items which reflect general feelings of being happy, easy to get along with and generally satisfied with life. Scores below the 16th percentile are associated with "general dissatisfaction, feelings of negative self-worth, and a longing for things to be different"(Piers, 1988, p.39). The

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cluster for Physical Appearance and Attributes and the cluster for Popularity were not evaluated in this study since these areas are outside the boundaries of the teacher/researcher's control.

The tables on the following pages show group average scores for the *Piers-Harris Children's Self-Concept Scale*. Each table is followed by an interpretation and analysis of this information.

Table 7

Piers Harris Children's Self-Concept Scale

Physical Education Average Scores

Total Class

Area Scored	Average Raw Score	Average Percent
Total Score	58 points out of 80	63 percent
Cluster I	12 points out of 16	40 percent
Cluster II	13 points out of 17	60 percent
Cluster IV	11 points out of 14	70 percent
Cluster VI	8 points out of 10	56 percent

Table 7 indicates that the students in the fifth grade physical education class had a total average score of 63% which is above the average normal range for positive self-concept. Cluster I, Behavior, with a score of 40%, falls within the average normal range. Cluster II, Intellectual and School Status, with a score of 60%, is in the above average range of normal. Cluster IV, Anxiety, with a score of 70%, is in the above average normal range. Cluster VI, Happiness and Satisfaction, with a score of 56%, is in the above average range of normal. All scores are within or above the average normal range for positive self-concept.

Table 8

Piers Harris Children's Self-Concept Scale

Physical Education Average Scores

Random Sample Group

Area Scored	Average Raw Score	Average Percent
Total Score	65 points out of 80	82 percent
Cluster I	13 points out of 16	51 percent
Cluster II	15 points out of 17	81 percent
Cluster IV	13 points out of 14	90 percent
Cluster VI	9 points out of 10	72 percent

Table 8 shows that the students in the fifth grade physical education class's Random Sample Group scored in the above average normal range for positive self-concept, with a score of 82%. All Random Sample Group cluster scores were above the average normal range: Cluster I, Behavior, 51%; Cluster II, Intellectual and School Status, 81%; Cluster IV, Anxiety, 90% and Cluster VI, Happiness and Satisfaction, 72%.

Table 9

Piers Harris Children's Self-Concept Scale

Physical Education Average Scores

Target Group

Area Scored	Average Raw Score	Average Percent
Total Score	41 point out of 80	21 percent
Cluster I	11 points out of 16	32 percent
Cluster II	9 points out of 17	24 percent
Cluster IV	8 points out of 14	37 percent
Cluster VI	7 points out of 10	39 percent

Table 9 shows that the students in the fifth grade physical education class Target Group scored in the low average normal range for self-concept with a score of 21%. Cluster I, Behavior, Cluster IV, Anxiety, and Cluster VI, Happiness and Satisfaction

all had scores within the average normal range with scores of 32%, 37% and 39% respectively. Cluster II, Intellectual and School Status however, with a score of 24%, was in the low average normal range. The low total score for the Target Group reflects not only the clusters addressed in this report but the total battery of questions contained in the inventory. The total score was effected by the two clusters not addressed in this report. Although the average scores for the Target Group are lower than the Random Sample Group or total class average scores, they are still within the normal range for positive self-concept.

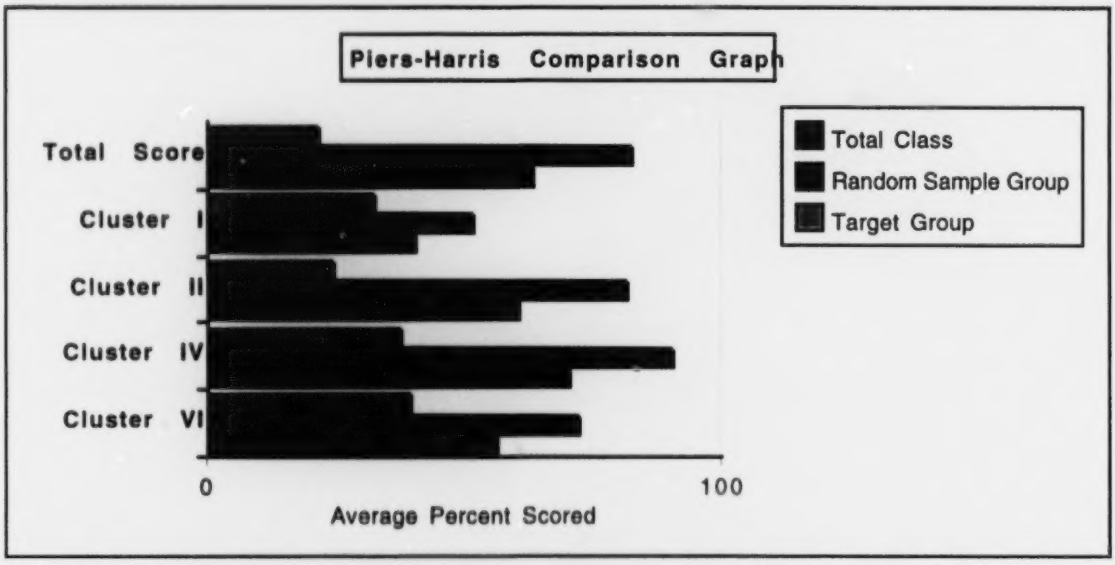

Figure 3 Comparison Graph for the *Piers-Harris Children's Self Concept Scale* Physical Education

In Figure 3 the average scores for the total fifth grade physical education class, the Random Sample and Target Groups show that the Target Group scores are consistently lower than the other two groups. The Random Sample group has scored higher in all areas

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with the total class average scores in the middle. It also shows that all groups are within the average normal range for positive self-concept.

Table 10

Piers Harris Children's Self -Concept Scale

Science Average Scores

Total Class

Area Scored	Average Raw Score	Average Percent
Total Score	57 points out of 80	60 percent
Cluster I	13 points out of 16	51 percent
Cluster II	12 points out of 17	49 percent
Cluster IV	9 points out of 14	48 percent
Cluster VI	8 points out of 10	56 percent

Table 10 shows that the average scores for the seventh grade science class are all within or above the average range for positive self-concept. The total class average of 60% is above the average range for positive self-concept, Cluster I, Behavior, with a score of 51% and Cluster VI, Happiness and Satisfaction, with a score of 56%, are both in the above average range. Cluster II, Intellectual and School Status, with a score of 49% and Cluster IV, Anxiety, with a score of 48% are both in the upper average range. The data suggests the seventh grade science students are, as a whole, students who are satisfied with themselves, school and their future expectations. It must be noted again that these scores reflect the average for all the seventh grade students. The two groups, Random Sample Group and Target Group, scored differently as shown in the following tables.

Table 11

Piers Harris Children's Self-Concept Scale

Science Average Scores

Random Sample Group

Area Scored	Average Raw Score	Average Percent
Total Group	66 points out of 80	85 percent
Cluster I	15 points out of 16	81 percent
Cluster II	14 points out of 17	70 percent
Cluster IV	12 points out of 14	81 percent
Cluster VI	10 points out of 10	90 percent

Table 11 summarizes the scores of the Random Sample Group in the seventh grade science class. The total average score for this group,85%, is above the average range. All Cluster scores averages are above the average range for positive self-concept as shown in Table 11. These scores indicate a positive level of self-esteem in general for this group.

Table 12

Piers Harris Children's Self-Concept Scale

Science Average Scores

Target Group

Area Scored	Average Raw Score	Average Percent
Total Score	49 points out of 80	38 percent
Cluster I	11 points out of 16	32 percent
Cluster II	9 points out of 17	24 percent
Cluster IV	9 points out of 14	48 percent
Cluster VI	6 points out of 10	20 percent

The average scores for the Target Group in seventh grade science as shown in Table 12 are within the average range for positive self-concept. The Cluster II, Intellectual and School Status at 24% and Cluster VI, Happiness and Satisfaction at 20% are in the low average range. Cluster I, Behavior and Cluster IV,

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Anxiety are within the average range with scores of 32% and 48% respectively. These students according to Piers(1988) are still satisfied with school in general. It should be noted that these scores are averages and that within this group some low individual scores indicate areas to be monitored. The Target Group average scores are in most areas lower than the Total Group average and the Random Sample Group average scores as seen in Table 12.

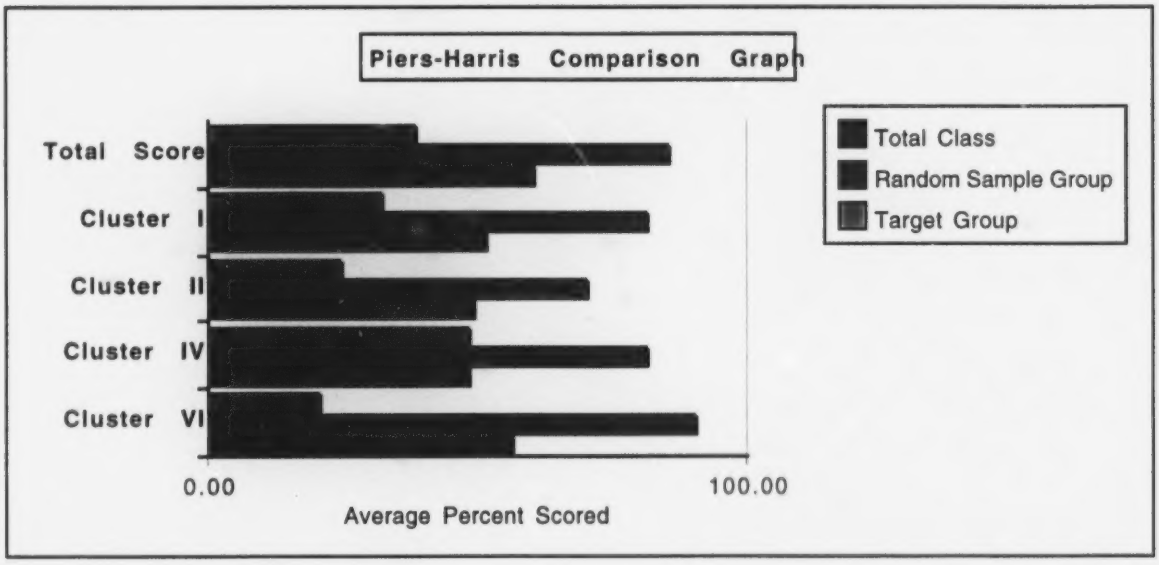

Figure 4 Comparison Graph for the *Piers-Harris Children's Self-Concept Scale* - Science

Figure 4 compares the three science groups for total average score and the four cluster average scores. The Target Group's average scores, with the exception of one cluster score for Anxiety, are all below the Total Class and Random Sample Group scores. The Random Sample Group scores are higher than the two other groups in all areas noted. All scores are within the average or above average range. Based on these results it appears that the seventh grade science students view themselves as having a positive self-concept.

A second baseline, level of achievement, is also documented. Due to the differences in the curriculum and evaluation methods in the physical education class and the science class, the method used to obtain the achievement baseline is specific to the content area. Documentation information is explained for each content area.

The level of achievement in fifth grade physical education is determined by the amount of participation during class activities. A pass/fail system is used at this grade level. The teacher/researcher developed a checklist to measure the level of student involvement during daily classroom activities (Appendix A). Weekly observations were made and averaged to document pre-intervention achievement.

Table 13 shows the Random Sample Group's level of activity to be higher than the level of activity displayed by the Target Group. In all areas of participation the Target Group scored the lowest with the Random Sample Group's average scores being higher.

Table 13

Class Participation

Fifth Grade Physical Education

Comparison Chart

Factor	Random Sample Group	Target Group
Voluntary Participation	4 out of 5	0 out of 5
Teacher Initiated Participation	4 out of 5	4 out of 5
Interaction with Classmates	3 out of 5	3 out of 5
Total Group Average	11 out of 15	7 out if 15

Table 13 shows that the Random Sample Group's average total score is 1 points and the Target Group's total average score is seven points. In the area of teacher initiated participation, the

Random Sample Group's average score and the Target Group's average score was four points. Both groups scored an average of three points in the area of interaction with classmates. In the area of Voluntary Participation, the Random Sample Group's average score was four while the Target Group's average was zero.

The level of achievement in seventh grade science is based on two areas, grade averages and homework completion. Grade averages are based on homework grades and test scores. The percentage of homework completion was calculated to indicate how the groups compare for responsibility in this area. In science class, the completion of work impacts the grade received. The two areas together are an indication of academic standing in science.

Table 14

Rate of Homework Completion

Seventh Grade Science

Group	% of Homework Completed on Time
Total Class	90
Random Sample Group	94
Target Group	69

Table 14 shows the percentage of homework assignments completed for each of the groups. The Target Group has a lower percentage of completed homework and homework turned in on time.

Table 15

Grade Averages Pre-Interventions

Seventh Grade Science

Groups	Average Grade
Total Group	80 per cent
Random Sample Group	82 per cent
Target Group	69 per cent

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The Target Group also has the lowest grade point average of the three groups as seen in Table 15. The total class scores reflect the middle range between the Target and Random Sample Groups. The Random Sample Group scores reflect higher achievement and a higher percentage of homework completion.

The results of the Florida Key and *Piers-Harris Children's Self-Concept Scale* indicate that the fifth grade physical education and seventh grade science students appear to possess positive self-esteem. The data also indicates that the level of overall self-concept and achievement for the Random Sample Groups are higher than the same areas for the Target Groups. The Total Class average scores fall in the area between the Random Sample and Target Groups. It also appears that the level of achievement and level of self-esteem are related. The Target Groups with lower levels of self-esteem also had the lower level of achievement. The opposite was shown in the data for the Random Sample Group. This group displayed higher levels of self-esteem and the higher level of achievement. Although the teacher/researchers can not report a problem in the area of self-esteem, strategies to enhance self-esteem will be implemented in an attempt to increase student achievement.

Probable Causes

Literature Review

The literature suggests four periods of development that contribute to the evolution of self-esteem in individuals. These areas include the student's upbringing, initial school experience, physical and mental changes occurring during adolescence and the continuing school experience.

Upbringing can contribute strongly in the development of self-esteem. Children who have experienced a home in which love, respect and acceptance are in place and consistently practiced tend to have good self-esteem (Branden, 1990). According to Coopersmith, (as cited in Krupp, 1992) the three conditions which contribute to the development of individuals' self-esteem are, parental warmth, respectful treatment and clearly defined limits. If children sense the love and concern of their family and feel they are seen as valuable people they are experiencing this parental warmth. When children are allowed to express their opinions and have a voice in family decisions they are being treated with respect. By setting requirements and expectations for success the parents set clearly defined limits allowing the children to feel that they are cared for. A parental attitude of positive regard and affection is fostered by these three conditions (Purkey, 1970). This in turn enhances children's self-esteem.

Parents usually fill the role of the significant other during childhood, therefore we look to them as the source of early self-concepts in attitudes, values and behaviors in their children. Children have limited options when choosing their significant other. The choice must be made from those persons having the

potential to interact with the children on a regular basis. Significant others are defined as individuals selected and unconditionally valued by the children. They may inspire the children to be self-reflective and encourage them to interpret their own behavior (Kash, Borich, 1978).

The children's initial school experience can foster a change in who the children view as a significant other. As children enter the educational system their exposure to a new environment expands their options allowing them to select a new significant other. Often this will be their teacher. Regardless of the state of the children's self-esteem at this time, the teacher can provide experiences from which the students can derive a positive sense of self-esteem (Kash, Borich, 1979).

Another developmental period of the children's self-esteem includes the physical and mental changes that occur during adolescence. This often fits the time frame of junior high school. In some circumstances the transition into junior high school can have a disturbing effect on self-esteem (Blyth, Traeger, 1979). Puberty, changes in mental outlook, increased looking to peers and the awakening of sexuality all contribute to making the middle school years a time of emotional turmoil (Alexander, 1981). Early adolescence is a time of transformation as their bodies change from child to adult stature. Both primary and secondary sexual characteristics develop for the first time resulting in a change in how the children view themselves (Blyth, Bulcroft, Simmons, 1981). During this time, a change also occurs in the individuals' relationships with their significant others, parents and peers. Children begin the process of detaching from parents and establish themselves among their peers. This can lead to major changes in

who the children interact with most often and how they view themselves in these relationships (Blyth & Traeger, 1983).

Far too many children come to school day after day afraid to take chances because no one seems to be able to care for them. If teachers do not provide a caring environment students will continue to be afraid to take risks and never learn, for learning requires some risk taking (Dorrell, 1991). When the classroom environment is not comfortable students experience anxiety over how to please the teacher and the reaction of their peers if they make a mistake. Anxiety can prevent students from participating in class because they think they may look foolish or appear ignorant, therefore risk taking may not occur and learning is inhibited (Harmin, 1994).

Students with low self-esteem feel depressed, angry, incompetent and unlovable. They make comments like, "I can't," and "Why bother" (Krupp, p.166). Due to their behavior, these negative thoughts are reinforced by those around them. The students begin to feel that no one cares about them and they cannot make things work. A cycle of negative feelings develop adding to the lack of positive self-esteem in these students (Krupp, 1992).

"Society cannot afford to raise children with low self-esteem" (Krupp, 1992). Many negative behaviors manifest themselves in students with low self-esteem. Behaviors such as dropping out of school, getting into substance abuse and cheating are more often found in these students compared to those with high self-esteem (Krupp, 1992).

Teachers and staff create a school environment that can either foster or diminish self-esteem. An environment where there is no warmth, defined limits or respectful treatment can breed a

low sense of self-esteem. Students in this type of environment do not know how to behave, feel that others do not listen to them and lack a sense of belonging. This contradictory environment can cause students to develop an erratic sense of self because they are never quite sure whether to view themselves as good or bad (Krupp, 1992).

Many classrooms create an environment that expects perfection. If this environment demands perfection, self-esteem will be tentative and conditional, existing only as long as students do things exactly right and reach perfection. This restriction on self-esteem leads Krupp to state that "expecting perfection hurts self-esteem" (1992, p.165).

Although the above factors enter into the formation of the students' self-esteem, the teacher/researcher has no influence over the students' upbringing, initial school experience or journey into adolescence. As teacher/researcher the task was to provide the students with a cognizant significant other and a nurturing classroom environment; therefore, the literature reviewed primarily focused on the role of the teacher as significant other and facilitator of the classroom environment.

Self-esteem cannot be changed by another however an esteeming climate can be established by educators. Students in such a classroom are provided with an environment where they are able to raise their own levels of self-esteem (Krupp, 1992).

Combs, Avila and Purkey state that hundreds of research studies document the effects of self-esteem upon students' success at every level of education. Cognitive learning increases when self-concept increases (as cited in Wallin, 1982). Students who are successful in school tend to be individuals who feel good

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about themselves and their abilities. According to Bledsoe, Campbell and Irwin (as cited in Purkey, Cage and Graves, 1971) there is an emphasis on the relationship between school success and self-image. There is a consistent correlation between self-perceptions and academic achievement (Purkey, Cage and Graves, 1971). Teachers providing an environment in which students feel successful enhance their students' sense of well being (Hedelin & Sjoberg, 1991).

A positive classroom environment encourages positive self-esteem. The conditions cited as contributing to the development of positive self-esteem in children's upbringing are the same conditions characteristic of a classroom environment appropriate for the development of positive self-esteem. According to Coopersmith,three characteristics of such an environment include warmth as evidenced by student-teacher interaction, clearly defined limits, and respectful treatment (as cited in Krupp, 1992).

A positive classroom environment also allows the students to feel comfortable and encourages them to actively participate and take appropriate risks. Dr. Larry Dorrell sums up the importance of a comfortable and supportive classroom environment when he states it is "essential that the teacher teach a child to take appropriate chances. For nothing great or even average was ever accomplished without risks or taking chances. Students need to know that taking a chance and coming up short is all right" (Dorrell, p.10, 1991). An environment that provides students with these opportunities and does not require perfection does not make positive self-esteem conditional. By fostering this type of environment, the teacher will create an esteeming classroom

atmosphere where the students will feel comfortable because they are cared about, know the limits, are treated with respect, and treat others with respect.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

Many causes were explored while researching the problems of low self-esteem on student achievement. Using the information gathered during research it was determined that the three areas of intervention would be: establishing a positive relationship between student and teacher, fostering positive interaction among peers and creating a positive and caring classroom environment. Establishing a positive student teacher relationship involved the use of dialogue journals, praise and rewards and positive discipline. Cooperative groups were used to increase appropriate social skills and foster peer relationships. These areas of intervention, along with physical changes in the classroom, contributed to the creation of a caring and positive classroom environment.

Self-esteem is directly influenced by teacher/student interactions (Hedelin & Sjoberg, 1985). Students perceptions of themselves and their interactions with their teacher play a major role in their attitude toward school. These perceptions not only influence their attitude toward school but their interest in their subjects and therefore their achievement. A teacher who gives thought to the students' need for self-esteem is likely to improve

the students intellectual ability. Teachers who get to know their students personally, make the students feel more attached and secure (Hedelin & Sjoberg, 1985).

Nancie Atwell observes in her book, In the Middle, that dialogue journals elicit a personal connection (1987). This is a safe method of communication, linking the teacher and students. Kay Leigh Hagan (as cited in Foster) states that journal writing is one of the most effective ways to build self-esteem (1995). Journaling is a way of exercising your mind, monitoring your thinking and making reflections a natural consequence of the process (Zemelman, Daniels & Hyde, 1993). Students can write down their responses, record what they know, investigate their own thinking and make predictions for what to do next. Sharing journals open a private channel of conversation between the student and teacher. A major benefit to this private communication is that students often say things in the journal entry that they would not share in class. This provides the teacher with valuable feedback about the students (Zemelman et al., 1993). A second benefit to this communication is the opportunity for the teacher to move the students' thinking in one of three directions. Teacher comments can affirm, challenge or extend a students' thinking, thus encouraging them to fine tune or develop their skills (Atwell, 1987). In writing comments in the students' journals, there is a direct and intimate line of communication established and maintained. This line of communication provides the teacher with a positive method of interaction with the students.

Students appreciate receiving praise and rewards. In proper measure, this can motivate them to do their best and assist them in becoming confident, self-assured individuals (Harmin, 1994).

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Teachers should tell the students how well they have performed and how much their work is appreciated. The students should know exactly what they have done and the positive behavior that they are being praised for. Once the behavior standard is set and the task is accomplished, the reward of praise is given. This is an example of a simple three step method of enhancing self-esteem. In giving praise, the teacher needs to clarify the appropriate behavior so the student can reflect upon the action used to achieve success. Students are then able to identify the skills and abilities used to be successful and analyze how they feel about this success. The students can therefore realize that <u>they</u>, not the significant other, are responsible for their success or their failures. This type of praise gives the student tools necessary to succeed when the significant other cannot be there (O'Brien, 1989).

There is a relationship between positive discipline and cooperation. Hundreds of studies have shown that in a pro social classroom, achievement is enhanced. In a pro social classroom, cooperative learning plays an important role. The philosophy behind Glasser's positive discipline is that success leads to success and failure leads to failure. He states that for students to be truly successful, the needs of belonging, freedom, power and fun must be satisfied (1996).

The needs listed for positive discipline are addressed by incorporating cooperative learning in the classroom. In learning social skills, students are a part of a group and therefore fulfill the need for belonging. Data gathered by Roger and David Johnson at the University of Minnesota showed that with the use of cooperative learning, student to student interactions improved

along with dramatic increases in student achievement and positive self-esteem (as cited in Bellanca & Fogarty, 1991). The need for power can be met through the opportunity to execute different roles for different assignments. Students who are seeking power can be placed in leadership roles during cooperative group activities (Bellanca & Fogarty, 1991). The need for fun can also be addressed through cooperative learning. This need can be fulfilled when a task is motivating or interesting to the student. Students are given a greater variety of experiences: they have more chances to speak, take initiative, make choices and develop good lifelong learning skills by working cooperatively (Harmin, 1994). Cooperative groups are used in cooperative learning to create a classroom in which student achievement, self-esteem and favorable attitudes toward school increase (Bellanca & Fogarty, 1991).

Along with the climate of the classroom, the physical environment can be utilized to make the students feel comfortable. Harmin's strategy for increasing the students' feelings of comfort in the classroom is to display signs called "Truth Signs" (1994). These are not the typical classroom signs, they are meant to expand the students' feelings of confidence. Important truths about learning are stated on the truth signs. These signs do not state rules or consequences. An example of one of Harmin's truth signs would be "Everyone needs time to think and learn" (Harmin, 1994, p.54). These signs communicate life truths that often support, reassure and strengthen positive feelings in the students (Harmin ,1994).

Often teachers do not realize that the course content they teach is sometimes less important than how they teach. A

comfortable environment must be created which encourages the taking of risks and provides support. This positive climate builds positive self-esteem. The interaction between teacher and student provided by the intimate communication of dialogue journaling, the appropriate praise revealing to the student their skills and abilities, and the fulfillment of their needs through positive discipline all provide the students with the essential elements to enhance their self-esteem and their academic achievement. Cooperative learning adds to this esteeming atmosphere because in developing social skills the students gain a sense of belonging and are free to take risks which allow them to learn. Finally, all of this occurs in a classroom that not only encourages these positive feelings, but physically displays meaningful reminders of important life truths.

Action Plan for the Interventions in Life Science and Fifth Grade Physical Education

The teacher/researchers collected data to identify a Target Group and Random Sample Group of six students at each level. The baseline data collection began the second week of school and lasted for six weeks. The data came from student self-report, teacher/researcher observations and midterm grades. The students responded to journal stems initiated by the teacher/researcher. Responses were written back to the students by the teacher/researcher. The students completed the *Piers-Harris Children's Self-Concept Scale* during the sixth week of observation. This report focuses on the student's conscious self perceptions (Piers, 1984). Weekly teacher observations were recorded by the use of checklist and written comments. The Florida Key checklist was modified for easier use and completed on a weekly basis prior to interventions and once during the final week of the intervention period (Appeneix B). The teacher kept weekly journal entries describing class activity and behavior. Student grades at midterm and homework completion (science only) were included in determining the baseline status of each group.

The intervention period began during week seven. The techniques used to collect data were used throughout the period so that upon completion of the inventions comparisons could be made. In addition to the cooperative groups, study buddy activities and dialogue journals, the classroom appearance had changed. Posters listing appropriate social skills, and truth signs stating important truths about learning were displayed. Group products and individual work were also displayed. Praise of on task behavior or

good work takes the form of verbal classroom praise, notes and phone calls home. Positive discipline strategies are implemented as needed.

The action plan for each class follows. Each plan is presented in five day weeks. Although the curriculum for science differs from the curriculum for physical education, the students and their perception of self are the focus of this study. The action plans are specific to the curriculum for each course, however,the interventions are adaptable to physical education and science.

Action Plan for Fifth Grade Physical Education

Week 1 Topic I: Gathering baseline information through introduction of soccer skills

A. Teacher observation checklist-Florida Keys

B. Teacher journaling

C. Students placed with partners selected by teacher

Week 2 Topic II: Gathering baseline information through soccer skills and game play

A. Students placed with partners selected by teacher

B. Students placed with groups selected by teacher

C. Teacher anecdotal records kept

Week 3 Topic III: Gathering baseline information through the introduction of football skills

A. Students placed with partners selected by teacher

B. Teacher observation checklist-Florida Key

C. Teacher anecdotal records kept

Week 4 Topic IV: Gathering baseline information through football skills and game play

A. Students placed in groups selected by teacher

B. Teacher anecdotal records kept

C. Students placed in partners selected by teacher

Week 5 Topic V: Circuit Training (2 weeks)

A. Individual assessment of student skills

B. Teacher anecdotal records kept

Week 6 C. Teacher praise as warranted

D. Positive telephone calls home as warranted

E. Written encouragement communicated

F. Base group cooperative activity to discuss each student's strengths

During week 6 the *Piers-Harris* was administered. The self-esteem test was measured for future comparison. Midterm grades were given. Interventions were implemented. Base groups were established for pair-share and cooperative learning.

Week 7 Topic VI: Fitness Training (2 weeks)

A. Individual assessment of student skills
B. Teacher anecdotal records kept
C. Teacher praise as warranted
D. Telephone calls home as warranted

Week 8
E. Written encouragement communicated
F. Base group cooperative activity to discuss each student's strengths

Week 9 Topic VII: Jump Rope Activities

A. Individual assessment of student skills
B. Pair-share in base groups
C. Base group cooperative activities
D. Teacher anecdotal records kept

Week 10
E. Teacher praise as warranted
F. Positive communication to student and parent as warranted

Week 11 Topic VIII: Floor Hockey-skill and Game Play

A. Pair-share in base groups
B. Base group cooperative activities
C. Teacher anecdotal records kept

Week 12
D. Teacher praise as warranted
E. Positive communication to student and parent as warranted

Week 13 Topic IX: Paddles and Balls and Bean Bag Activities (2 weeks)

A. Pair-share in base groups

B. Base group cooperative activities

C. Teacher anecdotal records kept

Week 14 D. Teacher praise as warranted

E. Positive communication to student and parent as warranted

Week 15 Topic X: Introduction to Volleyball Skills and Game Play

A. Pair-share in base groups.

B. Base group cooperative activities

C. Teacher anecdotal records kept

Week 16 D. Teacher praise as warranted

E. Positive communication sent as warranted

During Week 17 the *Piers-Harris* was given again for comparison. Information will also be tallied through the Florida Key.

Action Plan for Life Science

Week 1 Topic: Introductory Material

A. Safety discussion and demonstration: whole class brainstorms what they know about safety and complete a KWL on the board concerning safety.

B. Students make journal entry. Stem: Why is safety important to me?

Week 2 Topic: Scientific Method

A. Class brainstorms procedure for testing the strength of paper towels, introduction to Idea Labs.

B. Students are assigned groups to brainstorm procedures for Idea Labs, all different topics.

C. Individual assignment: write up a complete procedure for making a peanut butter and jelly sandwich.

D. In class the student will follow his procedure as read by a partner to make the sandwich. No modifications are made.

E. Students make journal entry. Stem: How did I feel writing the sandwich procedure by myself compared to writing the Idea Lab procedure with the group? List some pros and cons.

Week 3 Topic: Measurement

A. Review measurement tools.

B. Students work with a partner on a microscope activity.

C. Students make journal entry. Stem: How did I feel working with a partner on this activity?

Week 4 Topic: Classification

A. Students individually complete the grocery store classification activity.

B. Students make journal entry. Stem: How did I feel doing

this activity by myself compared to working with a partner?

Week 5 Topic: Classification

A. Introduce cooperative groups and roles within groups.
B. Student in cooperative groups complete classification project, using items of interest to the group (example: musical groups, sports cards, magazines, etc.).
C. Students make journal entry. Stem: How did I feel about my role in the cooperative group? Did everyone do their role as described?
D. Pair-Share groups (study buddies/lab partners) are assigned for support in learning skills and doing labs.
E. Midterm grades are complete. These scores to be included in the baseline information.

Week 6 Topic: Classification

A. Cooperative group activity. Using pictures. students create a collage or graphic organizer to show the classification system used today.
B. Students work with study buddies to review for chapter test.
C. Students make journal entry. Stem: Choose one statement and defend: I feel I review better by myself or I feel I review better with my study buddy.
D. Students complete Piers-Harris Children's Self-Concept Scale. Target, Random Sample and Whole Group baseline information is completed.

Week 7 Topic: CAT Test week (not all classes meet daily)

A. Students make a journal entry concerning the chapter test. Stem: How I feel I did on the test and why.

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B. Whole class brainstorms pros and cons of their test preparation.

Week 8 Topic: What is Life?

A. Class brainstorms the criteria of a living thing.

B. Cooperative groups work on presentation of the life processes. The use of graphic organizers is encouraged.

C. Students make journal entry. Stem: How did I contribute to the group?

Week 9 Topic: Life

A. Groups present webs of life processes.

B. Students make journal entry. Stem: General feelings about work in group.

C. Traditional lecture and notes to complete chapter.

D. Class discussion preceding review. Topic: What were the best parts of the chapter? (In place of journal entry)

Week 10 Topic: Review for test on life processes

A. Compromise review solution: Initial individual review work followed by study buddy work to check review and help on difficult questions.

B. Chapter test. Students add comments to end of test stating how they felt they did on the test, what was good in the way they reviewed and what they would do differently to review in the future.

Week 11 Topic: Cell

A. Read, outline and complete the study guide for the history of the cell theory with a study buddy. Option: own study guide grade or joint grade.

B. Introduce and explain the cell project.

Week 12 Topic: Cell

A. Observe sample cell projects. Brainstorm possibilities for individual cell projects.

B. Study buddy to support study for quiz (state assessment).

Week 13 Topic: Cell

A. Presentation of Cell Projects

B. Introduce diffusion with class participation in molecular movement activity.

Week 14 Topic: Cell

A. Completion of cell unit information.

Week 15 Topic Review for Cell Test

A. Whole class discussion on the best way to prepare for the test (replaces journal entry).

B. Multiple choice/short answer review is completed individually. Review packet with essay questions is completed with a study buddy.

Christmas Break

Week 16 Topic: Lab Activities to Supplement Cell Unit

A. Students will work with their study buddy/lab partner to observe onion and cheek cells using the microscope.

B. Using prior knowledge and lab observation, students will make a Venn diagram to compare and contrast plant and animal cells.

C. Diffusion Activity: Class will brainstorm possible procedures for the diffusion lab. Lab partners will design a procedure for the lab based on class discussion.

Week 17 Topic: Diffusion Lab

A. Lab partners set up, observe and complete diffusion lab as written in their design.

B. Students make journal entry. Stem: How I feel about this lab.

Week 18 Topic: Mitosis

A. Traditional overview lecture of the phases of mitosis.

B. Lab partners examine onion root tip slides for cells in the different phases of mitosis; draw and label what they observe.

C. In cooperative groups, students will plan and present the phases of mitosis to the class (example: cheer, webs, song, etc.).

D. Students make journal entry. Stem: The presentation that made the most sense to me was ...because...

Week 19 Topic DNA replication and review

A. Study buddies to prepare for test

B. Report cards for second quarter are issued. Students make journal entry. How am I doing in science? Do I feel okay at this point? What do I need to do?

Project Outcomes and Solution Components

After researching the impact of low self-esteem on student achievement, many causes were explored and possible solutions investigated. Using the information gathered during research the following terminal objectives have been formulated.

> As a result of teacher actions that foster positive relationships with the students, during the period of October 1996 through January of 1997, the fifth grade physical education and seventh grade life science students will display increased positive self-esteem and achievement, as measured by class grades, student self-report, journal entries and teacher anecdotal records.
>
> As a result of cooperative learning activities which promote positive peer relationships and social skills, during the period of October 1996 through January of 1997, the fifth grade physical education and seventh grade life science students will display increased positive self-esteem and achievement, as measured by class grades, student self-report, and teacher anecdotal records.

The following are the components to the solution:

1. The teacher will offer praise for specific actions or work. The praise will be in the form of verbal statements, written notes and telephone calls home.
2. The teacher will promote communication between the student and teacher through the use of teacher/student dialogue journal. This will create a rapport between them.
3. Two person base groups will be established for work on skills. The use of these groups is to provide support while learning skills.
4. Larger assigned cooperative groups will be used in a variety of settings to promote the use of appropriate social skills and cover curriculum.
5. Positive discipline strategies will be implemented to maintain positive peer relationships.

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6. Time will be allotted for processing and sharing of group and individual work.

7. Attention will be given to the physical appearance of the classroom allowing for the exhibition of student and group work. Samples of graphic organizers, energizers and cooperative group rules emphasizing appropriate social skills will be displayed on classroom walls.

Methods of Assessment

In order to assess the effects of the intervention, the students will be given the *Piers Harris Children's Self-Concept Scale* during February after the interventions have been in place for over twelve weeks. In addition, the teacher/researchers will complete the Florida Key on each student in the Target and Random Sample Groups, once per week for the final three weeks of the project period. These scores will be averaged to indicate the current inferred self-concept levels in the groups. These two tools will provide a level of comparison for the pre-intervention period and the post-intervention period. The comparison will show if the level of self-esteem in the groups has changed. The teacher/researcher in science will compare current grade averages and homework completion rates to those during the pre-intervention period. In physical education, the teacher/researcher will compare grades and class participation rates to those of the pre-intervention period. These scores will indicate any change in student achievement. In comparing the changes in self-esteem and student achievement, the impact of the intervention will be determined.

CHAPTER FOUR

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to increase student self-esteem and achievement by creating a positive and caring classroom environment. It was determined that the two areas of intervention would be establishing a positive relationship between student and teacher and fostering positive interactions among peers. This environment was established by the implementation of cooperative learning, specific praise, student/teacher journaling and altering the physical appearance of the classroom.

Cooperative learning was used to establish a pro social classroom as well as its use as an instructional technique in delivering and reviewing subject matter. The social skills were discussed prior to the formation of groups and practiced throughout the intervention period. The skills of listening, encouraging and cooperating were chosen to foster positive interactions among peers. The cooperative groups were established during the sixth week of school, after the first administration of the *Piers-Harris Children's Self-Concept Scale.* Cooperative learning was used an average of once a week during this period. In the physical education curriculum, cooperative learning was used to practice skills and during modified sport games. Lab

activities, projects and review sessions utilized cooperative learning groups in the science curriculum.

Specific praise, praise explicit to the behavior, social skill or academic achievement displayed, was used to encourage appropriate social skills and recognize achievement. The original plan called for specific praise in the form of verbal statements, written notes and telephone calls home. This was revised due to time constraints and the make-up of the classes. In the physical education class notations of praise were written in the students' daily assignment book to communicate positive social skills or achievement of a specific physical skill. Oral praise was given in both physical education and science classes as warranted. In science class, the specific praise took the form of explicit notations on homework, quizzes and tests. Notations were also made in the students' daily assignment book to communicate praise for a specific action or achievement to those at home as well as the student.

Journaling was used to enhance the relationship between the student and teacher whereby creating a positive and caring classroom atmosphere. The original plan was to journal once per week reflecting the students' view of the social skills used in an activity or their view of a project or activity. This was revised in physical education due to time constraints and the nature of the curriculum. The program for physical education for kindergarten through fifth grade is a twenty minute activity program with no written work in the curriculum. The introduction of journaling into the activity period with these time constraints made it difficult for the students to focus on the given journal assignment. The quality and content of the journal entries did not

provide the teacher/researcher with information pertinent to the study. For this reason, journaling was not used in fifth grade physical education.

Revision of the original plan for journaling in science occurred to meet the nature of the activities. Projects did not always end on a weekly basis. The topics of the journal entries remained centered around the students' perception of themselves in cooperative group activities (interpersonal relationships), their views of their achievements and steps taken to accomplish a task. These journal entries were written after projects, activities, tests, midterm grades and quarter grades.

Presentation and Analysis of Results

The effects on learner self-esteem of the intervention strategies, cooperative learning, specific praise, dialogue journals and changes in the physical classroom environment, were assessed by readministering the *Pier's-Harris Children's Self-Concept Scale*, completing the Florida Key for each student in the Random Sample and Target Groups, summarizing the student/teacher journal entries (science) or class participation checklist results (physical education), summarizing the teacher weekly observation journals, compiling the science homework completion rate and average grades at the conclusion of the intervention period. The data collected is organized according to the assessment tool, subject area and group assessed.

The Florida Key, as related in Chapter Two, is a tool that furnishes the teacher with insights into how students view themselves in relation to school. It is completed by the teacher without student participation or awareness. The group average scores for the Florida Key are found in the tables on the

following pages. Each table is followed by an interpretation and analysis of this information. A comparison of the pre-intervention and post-intervention assessment scores follow each interpretation.

Table 16

Florida Key

Fifth Grade Physical Education

Random Sample

Factors	Pre-intervention Average Score	Post-intervention Average Score
Total Score	70 out of 115	95 out of 115
Relating	18 out of 25	16 out of 25
Asserting	17 out of 20	18 out of 20
Investing	26 out of 35	32 out of 35
Coping	25 out of 35	29 out of 35

Table 16 shows the total average score for the Random Sample Group in the fifth grade physical education class is in the high range for positive self-concept as a learner. Three of the factors, also have scores in the high range. The only factor in the moderate range is Relating.

The average total score for the Random Sample Group is 25 points higher on the post-intervention assessment than the average total score on the pre-intervention assessment. Although the score for the factor Relating decreased, the increase in the scores for the other three factors moved the Random Sample Group's average total score to the high range for positive self-concept. This group's feelings of trust, confidence, and interest in school have increased during the intervention period.

Table 17

Florida Key

Fifth Grade Physical Education

Target Group

Factor	Pre-intervention Average Score	Post-intervention Average Score
Total Score	53 out of 115	65 out of 115
Relating	21 out of 25	21 out of 25
Asserting	11 out of 20	10 out of 20
Investing	23 out of 35	23 out of 35
Coping	4 out of 35	17 out of 35

The Target Group's total average score in fifth grade physical education is in the moderate range for positive self-concept as a learner as shown in Table 17. The score for the factor of Relating is in the high range while the other three factor scores are in the moderate range.

The total average score for the Target Group increased by 12 points on the post-intervention assessment. The most dramatic increase in score is for the factor, Coping, with an increase of 13 points moving it from the low range to the moderate range for positive self-concept. These students now have more trust in their abilities and interest in class.

Figure 5 on the following page compares the pre- and post-intervention average scores on the Florida Key for the fifth grade physical education Random Sample and Target Groups. The Random Sample Group's scores shows a greater increase than the Target Group. The average scores for both periods indicate that the students in both groups have a positive self-concept as learners.

Table 18

Florida Key Comparison Graph

Fifth Grade Physical Education

Random Sample and Target Group Comparison Graph

Factors	Random Sample Pre-intervention	Random Sample Post-Intervention	Target Group Pre-Intervention	Target Group Post-Intervention
Total Score	61	82	46	57
Relating	72	64	84	84
Asserting	85	90	55	50
Investing	74	91	66	63
Coping	70	83	12	48

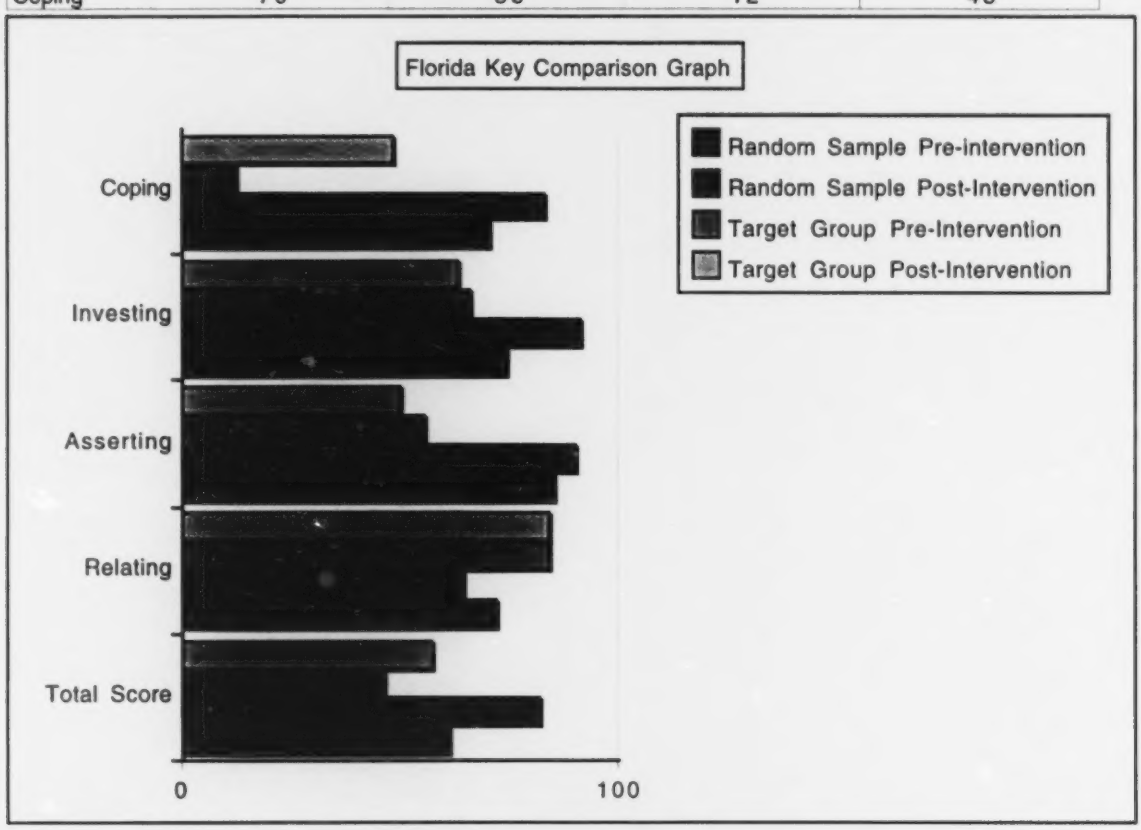

Figure 5 Comparison Graph for The Florida Key - Physical Education

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Table 19

Florida Key

Seventh Grade Science

Random Sample Group

Factor	Pre-intervention Average Score	Post-intervention Average Score
Total Score	67 out 115	77 out of 115
Relating	18 out of 25	19 out of 25
Asserting	11 out of 20	15 out of 20
Investing	24 out of 35	27 out of 35
Coping	14 out of 35	16 out of 35

The average scores for the Random Sample Group in seventh grade science, as shown in Table 19, all indicate positive self-concept as learners. The average scores for the total score and the factors of Relating, Asserting and Coping are in the high range for the Florida Key. The score for the factor, Investing, is in the moderate range.

The Random Sample Group's post-intervention scores for the Florida Key are all higher than the pre-intervention scores. Since the interventions have been implemented these students have shown positive growth in all factor areas. They are more confident in their interaction with others, have more trust in their academic ability and are more apt to express their opinions and volunteer in class discussions.

Table 20

Florida Key

Seventh Grade Science

Target Group

Factor	Pre-intervention Average Score	Post-intervention Average Score
Total Score	48 out of 115	67 out of 115
Relating	14 out of 25	16 out of 25
Asserting	7 out of 20	11 out of 20
Investing	16 out of 35	22 out of 35
Coping	12 out of 35	18 out of 35

In seventh grade science, the Target Group's average scores for all factors on the Florida Key are in the moderate range for positive self-concept as shown in Table 20. The Target Group's total average score for the post-intervention assessment rose as did the factor scores. A comparison of the pre- and post-intervention assessments for the students in the Target Group shows positive growth in all areas evaluated. The increase in the factor scores for Investing and Coping are significant as they reflect an improvement in the students' willingness to volunteer and take risks during class. They are more engaged in their learning.

The comparison of the pre-intervention and post-intervention scores for the Florida Key, as graphed in Figure 6, shows an increase in total average scores for the Random Sample and Target Groups. Both groups demonstrate positive growth for the factors of Relating, Asserting and Investing.

The Florida Key is a teacher completed assessment tool. The teacher/researchers have had more contact, interactions and time to observe the students by the end of the intervention period in comparison to the contacts, interactions and observations prior to

the initial administration of the Florida Key. This increased knowledge of the students benefits the teacher/researcher in completing the Florida Key. Time and the implementation of the interventions allows for growth in the student/teacher relationship, allowing insight from student/teacher conversations that had not occurred on a regular basis prior to the intervention period. It was necessary as a researcher to be aware of the relationships formed with the students and remain as objective as possible when completing the Florida Key.

Table 21

Florida Key

Seventh Grade Science

Random Sample and Target Group

Factor	Random Sample Pre-intervention	Random Sample Post-intervention	Target Group Pre-intervention	Target Group Post-intervention
Total Score	58	67	42	58
Relating	72	76	56	64
Asserting	55	75	35	64
Investing	40	77	34	55
Coping	68	46	46	51

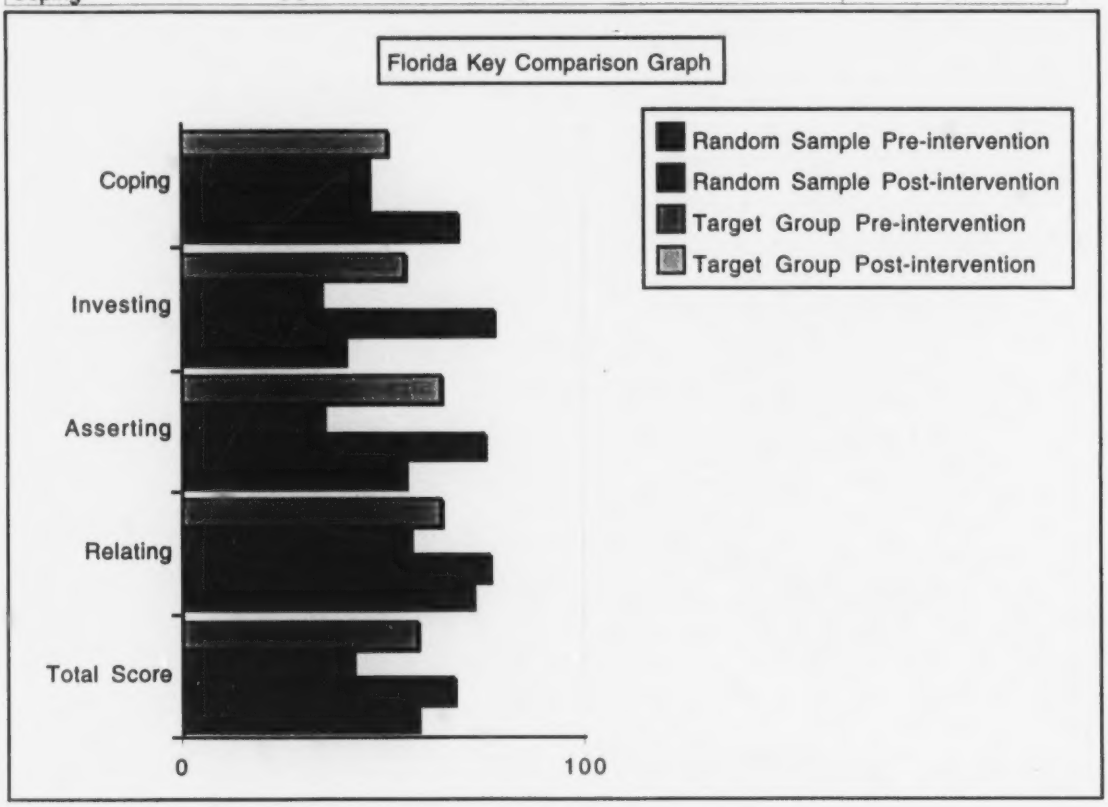

Figure 6 Comparison Graph for The Florida Key - Science

The *Piers-Harris Children's Self-Concept Scale*, as related in Chapter Two, is a self-inventory tool designed to assess how children and adolescents feel about themselves. Unlike the Florida Key, a nonreactive assessment tool, this tool focuses on the

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children's conscious self-perceptions. It is significant to note that the most reliable measure for this tool, and the score best supported by research, is the total score. The tables on the following pages show the pre- and post-intervention group average scores for the *Piers-Harris*. Each table is followed by an analysis of the information and a comparison of the pre-intervention and post-intervention scores.

Table 22

Piers-Harris Children's Self-Concept Scale

Physical Education Average Score

Total Class

Areas Scored	Pre-intervention Raw Score	Post-intervention Raw Score	Pre-intervention Percent	Post-intervention Percent
Total Score	58 out of 80	56 out of 80	63	70
Cluster I	12 out of 16	12 out of 16	40	40
Cluster II	13 out of 17	12 out of 17	60	60
Cluster IV	11 out of 14	11 out of 14	70	70
Cluster VI	8 out of 10	7 out of 10	56	56

Table 22 summarizes the raw scores for the *Piers-Harris Children's Self-Concept Scale* for the fifth grade physical education Total Class. The post-intervention scores indicate that the total average score is in the above average range for positive self-esteem. The cluster scores are all in the high end of the average range for positive self-esteem. The total fifth grade physical education class can be categorized as having positive self-esteem.

A comparison of the pre- and post-intervention assessment scores shows a decrease in the total average score for the Random Sample Group. Although there is a decrease in the total score, it is still in the above average range for positive self-esteem. These scores indicate that the students in the fifth grade

physical education class have positive feelings about their behavior, school success and the way they deal with anxiety. A general feeling of well being and happiness is shown by these scores.

Table 23

Piers-Harris Children's Self-Concept Scale

Physical Education Average Score

Target Group

Areas Scored	Pre-intervention Raw Score	Post-intervention Raw Score	Pre-intervention Percent	Post-intervention Percent
Total Score	41 out of 80	46 out of 80	21	31
Cluster I	11 out of 16	11 out of 16	32	32
Cluster II	9 out of 17	11 out of 17	24	38
Cluster IV	8 out of 14	8 out of 14	37	37
Cluster VI	4 out of 10	6 out of 10	4	20

Table 23 shows that the Target Group's total score falls in the average range for positive self-esteem. The cluster scores are also in the average range on the post-intervention assessment. A comparison of the scores for the pre- and post-intervention assessments on the *Pier-Harris* shows an increase in the total score on the post-intervention assessment. The cluster scores either remain the same or show an increase. This indicates movement in a positive direction for the physical education students in the Target Group. The level of self-esteem, as indicated by the data for this tool, is improving since the interventions have been put into place.

Table 24

Piers-Harris Children's Self-Concept Scale

Physical Education Average Score

Random Sample

Areas scored	Pre-intervention Raw Score	Post-intervention Raw Score	Pre-intervention Percent	Post-intervention Percent
Total Score	65 out of 80	65 out of 80	82	82
Cluster I	13 out of 16	14 out of 16	71	65
Cluster II	15 out of 17	14 out of 17	81	70
Cluster IV	13 out of 14	12 out of 14	90	81
Cluster VI	9 out of 10	9 out of 10	72	72

Table 24 shows that the fifth grade physical education students in the Random Sample Group's total score remained the same on both the pre- and post-intervention assessments. This total score is in the average range for positive self-esteem. All cluster scores remained in the high average range on the post-intervention assessment.

Figure 7 shows a comparison of the pre- and post-intervention scores for the Total Class, Random Sample Group and Target Group. All groups show an increase in the total score on the post-intervention assessment. Following the implementation of the intervention strategies scores reflect a positive influence on self-esteem.

Table 25

Piers-Harris Children's Self-Concept Scale

Physical Education

Random Sample and Target Groups Comparison Graph

Group	Total Score	Cluster I	Cluster II	Cluster IV	Cluster VI
Total Class Pre-intervention	63	40	60	70	56
Total Class Post-intervention	70	40	60	70	56
Random Sample Pre-intervention	82	71	81	90	72
Random Sample Post-intervention	82	65	70	81	72
Target Pre-intervention	21	32	24	37	4
Target Post-intervention	31	32	38	37	20

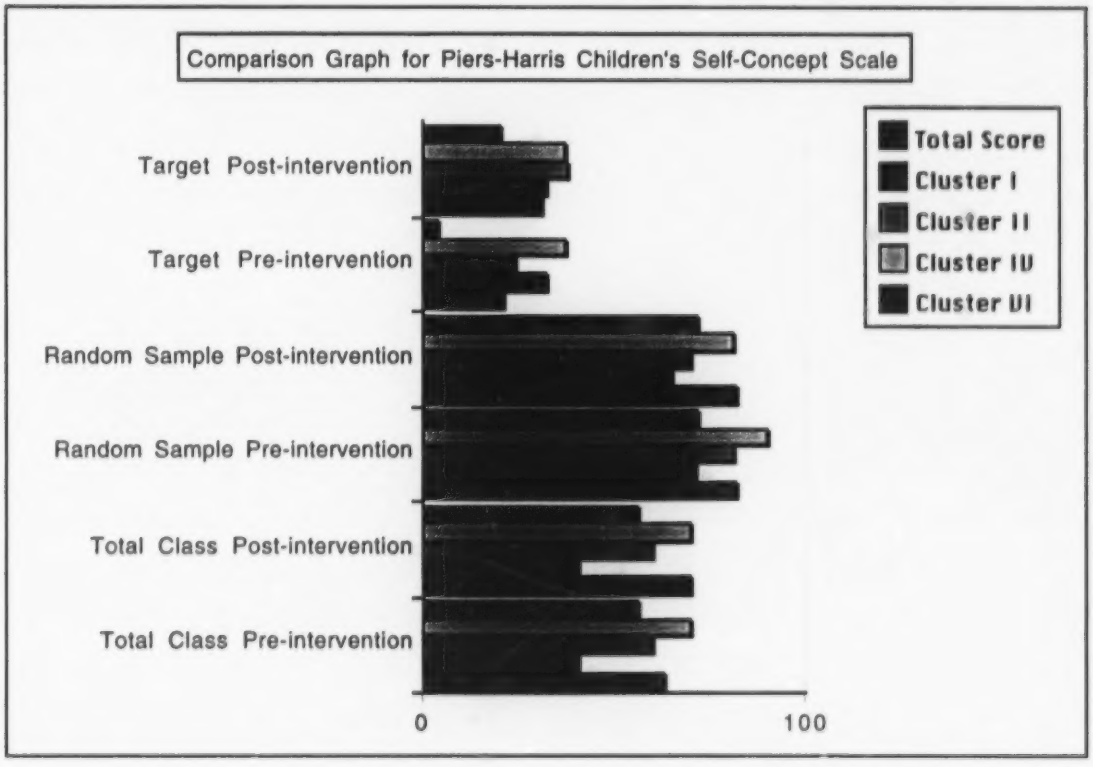

Figure 7 Comparison Graph for the *Piers-Harris Children's Self Concept Scale* - Physical Education

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The following tables show the pre-intervention and post-intervention group average scores for the *Piers-Harris Children's Self-Concept Scale* in seventh grade science. Each table is followed by an interpretation and analysis of the information and a comparison of the pre-intervention and post-intervention scores.

Table 26

Piers-Harris Children's Self-Concept Scale

Science Average Score

Total Class

Areas scored	Pre-intervention Raw Score-points	Post-intervention Raw Score-points	Pre-intervention Percent	Post-intervention Percent
Total Score	57 out of 80	54 out of 80	60	52
Cluster I	13 out of 16	13 out of 16	51	51
Cluster II	12 out of 17	11 out of 17	49	38
Cluster IV	9 out of 14	9 out of 14	48	48
Cluster VI	8 out of 10	7 out of 10	56	39

The post-intervention scores on the *Piers-Harris Children's Self-Concept Scale*, as shown in Table 26, do not show a dramatic change from the scores on the pre-intervention assessment. The total score is in the above average range for positive self-concept. The cluster scores are also in the high end of the average range for these clusters.

The pre-intervention scores on the *Piers-Harris* are slightly higher than the post-intervention scores. The total score in the post-intervention assessment dropped by 3 points translating into a drop of eight percentage points. The scores differed in an average of three answers. The *Piers-Harris* relies on a self-report format. Due to this format, it is possible that any or all of the following factors could have influenced the results. At the time of the administration of the post-intervention tool, the class period was divided into two parts to accomplish two separate

tasks, the completion of a test and the *Piers-Harris*. In retrospect, it is the belief of the teacher/researcher that the shortened time allowance could have influenced the results if any part of the student population felt rushed due to the limited time frame in which the post-intervention test was given. The post-intervention assessment for this tool was also administered during the seventh grade's month of preparation for the Illinois Goals Assessment Plan which could have influenced the results negatively in that the students were given many practice tests during this time. A third possible influence could be the students' assumed familiarity with the assessment since they had taken it once before. The students might not read the questions as carefully during the second test because they assumed that they remembered the questions from the first time it was given. This could negatively influence the results. The average scores although three points lower for the post-intervention assessment are within the average range for positive self-concept and indicate a continuing positive level of self-esteem for the seventh grade science students.

Table 27

Piers-Harris Children's Self-Concept Scale

Science Average Scores

Random Sample Group

Areas Scored	Pre-intervention Raw Score-points	Post-intervention Raw Score-points	Pre-intervention Percent	Post-intervention Percent
Total Score	66 out of 80	70 out of 80	85	93
Cluster I	15 out of 16	16 out of 16	81	95
Cluster II	14 out of 17	14 out of 17	70	70
Cluster IV	12 out of 14	14 out of 14	81	97
Cluster VI	10 out of 10	9 out of 10	90	72

Table 27 summarizes the Random Sample Group's scores on the *Piers-Harris* for seventh grade science. The post-intervention scores on this assessment tool are all above the average range for positive self-esteem.

A comparison of the pre-intervention and post-intervention scores on the *Piers-Harris* shows an increase in total average score in three of the four cluster scores. All scores are in the above average range for positive self-esteem. The post-intervention scores demonstrate that the level of self-esteem has increased following the intervention period for the students in the Random Sample Group.

Table 28

Piers-Harris Children's Self-Concept Scale

Science Average Score

Target Group

Areas Scored	Pre-intervention Raw Score-points	Post-intervention Raw Score-points	Pre-intervention Percent	Post-intervention Percent
Total Score	49 out of 80	48 out of 80	38	36
Cluster I	11 out of 16	11 out of 16	32	32
Cluster II	9 out of 17	9 out of 17	24	24
Cluster IV	9 out of 14	9 out of 14	48	48
Cluster VI	6 out of 10	6 out of 10	20	20

The average scores for the Target Group are shown in Table 28. The pre-intervention and post-intervention cluster scores for the Target Group on the *Piers-Harris* are the same. The total post-intervention score was lower by one point. It must be noted that two clusters have not been evaluated in the study as individual scores but are included in the total score averages. This would account for the difference in total score despite the identical scores for the four clusters evaluated.

The comparison graph in Figure 8 and the data in Table 29 sum up the data gathered on the *Piers-Harris Children's Self-Concept Scale*. The Target Group's scores did not change in any of the cluster areas, however the total score decreased by two points. This decrease did not significantly impact the Target Group's scores as they are still within the average range for positive self-concept. The Random Sample Group score is the highest of the three groups for positive self-esteem and showed the most growth in this area. The Target Group's total score was the lowest of the three groups. All groups have a favorable self-concept as a learner as supported by the data collected on the *Piers-Harris*.

Table 29

Piers-Harris Children's Self-Concept Scale

Seventh Grade Science

Total Class, Random Sample and Target Group Comparison Graph

Group	Total Score	Cluster I	Cluster II	Cluster IV	Cluster VI
Total Class Pre-intervention	60	51	49	48	56
Total Class Post-intervention	52	51	38	48	39
Random Sample Pre-intervention	85	81	70	81	90
Random Sample Post-intervention	93	95	70	97	72
Target Pre-intervention	38	32	24	48	20
Target Post-intervention	36	32	24	48	20

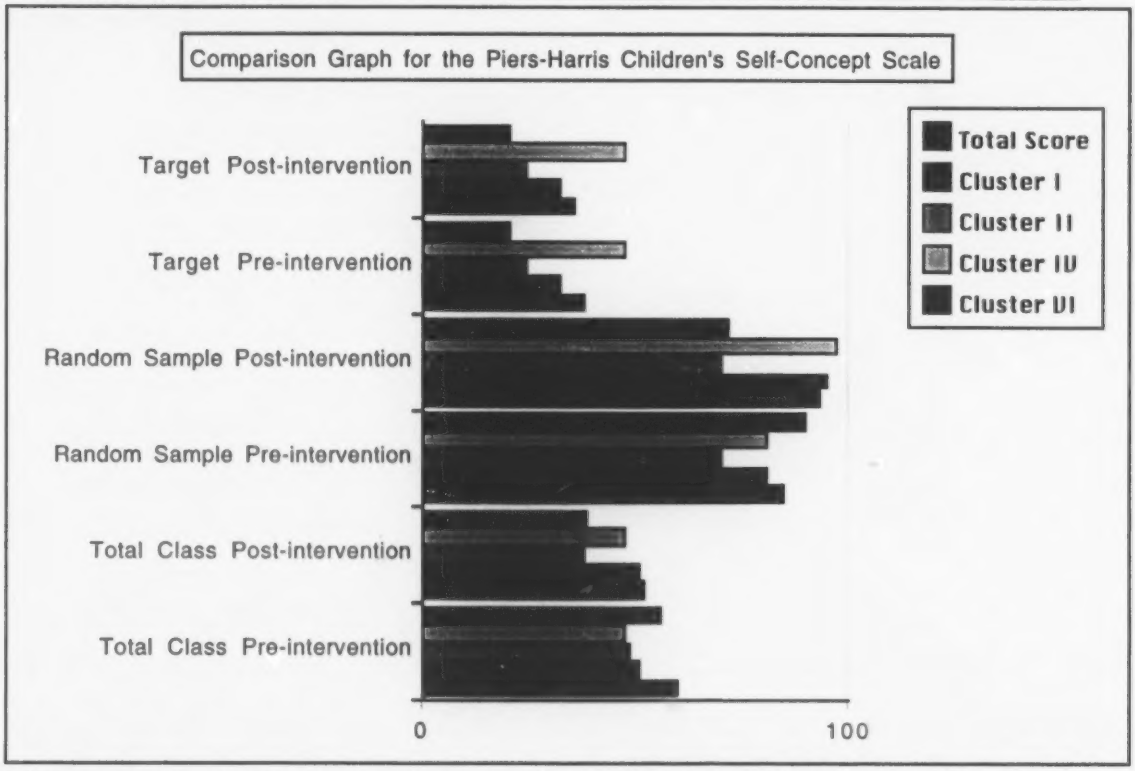

Figure 8 Comparison Graph for *Piers-Harris Children's Self-Concept Scale* - Science

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Table 30

Teacher Observation/Student Participation Checklist

Physical Education

Factor	Random Pre-intervention	Random Post-intervention	Target Pre-intervention	Target Post-intervention
Voluntary Participation	4 out of 5	4 out of 5	0 out of 5	2 out of 5
Teacher Initiated Student Participation	4 out of 5	5 out of 5	4 out of 5	4 out of 5
Interaction With Classmates	3 out of 5	4 out of 5	3 out of 5	3 out of 5
Total Group Participation	11 out of 15	13 out of 15	7 out of 15	9 out of 15

In the above checklist, a rating of zero or one indicates little or no classroom participation on the part of the student. A ranking of two or three indicates an average participation level on the part of the student. A four or five rating in the first three factors in the table indicates an above average participation level. In total group score, a score of zero to five shows little or no student participation. A 5-10 rating shows a moderate to average student participation level and a 11-15 rating in total score indicates a high or above average student participation level.

Table 30 shows the Random Sample Group's post-intervention total score increased by two points. The factors of Voluntary Student Participation and Student Interaction With Classmates increased by one point from the pre-intervention to the post-intervention assessment period. The Target Group's Voluntary Student Participation average score increased by two points from the pre-intervention to the post-intervention period, while the Teacher Initiated Participation and Interaction with Classmates average score remain the same. In the post-intervention total

score for the Random Sample, the student's increased their score by two points, still keeping them in the above average rating for student classroom participation. The Target Sample Group's total score increased by two points from the pre-intervention to the post-intervention assessment period, keeping them in the average rating for participation in the classroom. The increase in the Target Group's score from the pre-intervention to post-intervention period for the factor of Voluntary Participation indicates an increase in confidence in the students' decision to take part in classroom activities. The Random Samples increase in points for the factors of Teacher Initiated Participation and Interaction with Classmates also indicates more confidence in the students' willingness to interact with the teacher as well as the other students in the class.

Journal writing provided a safe method of communication between the teacher and students. A line of communication was developed between the teacher/researcher and the students through the use of dialogue journals. Throughout the intervention period the students responded to journal stems (listed in the life science action plan). Several generalizations can be drawn from the students' responses concerning the effects of cooperative learning, positive discipline, specific praise and their feelings about the classroom environment.

In the fifth grade physical education class cooperative learning was used in working on skills for a given sport. The teacher selected the cooperative groups based on student ability levels and competitiveness. Students with lower ability levels tended to be less willing to participate in class activities. Students with higher ability levels were paired with students of

lower ability. This pairing promoted interactions between pairs. As the intervention period progressed, it was noted that the students with the lower ability were more willing to participate in class activities. Through the peer support and interactions, confidence was increased as documented in weekly teacher journal and supported by the increased score for Investing on the Florida Key.

Cooperative learning took the form of study buddies during science class. The students worked on a variety of activities with their study buddy. Study buddies were assigned by the teacher or chosen by the students depending on the activity. As the intervention period progressed the students were allowed to choose their buddies more often because they demonstrated the ability to work well and stay on task regardless of who their buddy was. One of the generalizations reached was the unanimous opinion of the students that they were happiest when they had the opportunity to choose their own study buddy. Since the work was accomplished regardless of the study buddy this was a positive way to give the students some freedom, responsibility, and choice.

A second generalization drawn from student journal entries is the academic benefits noted by the students concerning cooperative learning. Learning is enhanced by working with others in that the students can discover how much they know because they discuss the information and work together to solve the problem rather than merely looking it up. They felt they learned more, remembered it better and appreciated the help from the others. Included in this generalization, drawn for the student journal entries, is the sense of support the students felt from the other group members and the class.

Another recurrent statement concerns discipline in the classroom. The journal entries made mention of the fact that the teacher does not yell unless she is joking. It was also stated that the students feel that there is control in the classroom but they are free to discuss things with the teacher. This type of environment, free from yelling and rigidness but orderly and safe contributes to the feeling of a classroom climate that is positive for self-esteem.

Students felt free to respond in positive or negative terms concerning class activities in their journals. Their responses to cooperative learning were unanimously positive, however, their responses to note taking and journal writing, although not unanimously negative, definitely were negative in nature. While stating their dislike for journaling, they noted that they understood the reason for journaling and felt there were valid reasons to do so. The main reason, as they viewed it, was for the teacher to know how they really felt about things so changes could be considered if necessary. The ability to have input concerning activities in the classroom contributes to an environment where the individual's opinion is respected.

Several students stated that the environment of the science class is different from other classes. They went on to state that the difference is positive and desirable. Reference was made to the fact that most other classes read from the book and discuss the information but in science they wonder what activities they will be involved in for the day. They look forward to a classroom environment where they have the support of their classmates and teacher, have others who will listen to them and are respected.

The information gathered from the student journal entries indicates the students are comfortable in the environment established during the intervention period. The positive statements made by the students concerning how they perceive their role in the classroom, the tone of the discipline methods used, the support and help they receive from their classmates and cooperative group members and the freedom to express themselves all add to an esteeming classroom atmosphere.

Prior to the intervention period the students did not make journal entries, therefore, a comparison of pre-intervention and post-intervention data cannot be made. The journaling itself was an intervention strategy. The information gained from the journal entries enabled the teacher/researcher to draw generalization from the material written by the students concerning their thoughts and feelings about the interventions and everyday happenings in their classroom.

The level of achievement in seventh grade science is based on two areas, grade averages and homework completion. Together, average grades and completion of work, are an indication of academic standing and achievement in science. The following tables show the grade average and rate of homework completion for each group during the pre- and post-intervention periods. Each table is followed by an analysis and a comparison of the data.

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Table 31

Rate of Homework Completion

Seventh Grade Science

Group	Pre-intervention % of Homework Completed on Time	Post-intervention % of Homework Completed on Time
Total Class	90	95
Random Sample Group	94	93
Target Group	69	88

Table 31 shows the percentage of homework assignments completed for each of the groups in seventh grade science. The Target Group has a lower percentage of completed homework and homework turned in on time. The Total Class had the best homework completion rate among the three groups.

The Total Class showed improvement in completing and turning in the homework on time with an increase of five percent. The Target Group's increase was the most dramatic with an increase of nineteen percent. The Random Sample Group was the only group to show a decrease in the homework completion rate. It should be noted however, that one student included in the Random Sample Group is on medication that alters behavior. This student did not always adhere to the medication schedule whereby impacting the student's homework completion. The completion of the homework varied with the medication schedule. This student's change in rate, due to medication, not due to the interventions, accounts for the Random Sample Group's drop in homework completion rate.

Table 32

Grade Averages

Seventh Grade Science

Groups	Pre-intervention Average Grade	Post-intervention Average Grade
Total Class	80 percent	85 percent
Random Sample Group	82 percent	87 percent
Target Group	69 percent	78 percent

The Target Group has the lowest grade point average of the three groups as seen in Table 32. The Random Sample Group has the highest grade average of the three groups. The Total Class average falls between the other two group's grade averages. The Target Group's grade average is in the average percentage range for science. The Random Sample and Total Class average grade percentages are in the above average grade range for science.

A comparison of the pre-intervention and post-intervention average grades are also shown in Table 32. Both the Random Sample and Target Groups' grade averages went up by five percentage points. The Target Group showed the greatest improvement with an increase of 19 percentage points in the post-intervention period. This increase moved the Target Group's average grades from the poor range to the average range in science. This is a significant increase. The Random Sample and Total Class average grades also moved up from the average to above average range in science during the post-intervention period.

Throughout the intervention period, the teacher/researchers made a weekly journal entry recording observations reflecting student behaviors and the success or failure of implemented teaching strategies. One generalization drawn from the journal entries was that as the intervention period proceeded, the number

of conflicts decreased and the cooperation among peers increased. A second generalization in both classes reflected the increase in voluntary class participation which in turn reflects a greater feeling of self-esteem resulting in a willingness to take risks. The students appeared to gain confidence in their abilities, again reflecting a willingness take risks. Another general observation documented in the teacher weekly journal was the students' increased awareness of learning styles that were exemplified by the truth signs. This observation was based on references made to the truth signs by the students when they saw a connection between the sign and an incident in class. The generalizations listed above were drawn from both the fifth grade physical education classes and the seventh grade science classes.

The fifth grade physical education and seventh grade science students according to the pre- and post-intervention results on the Florida Key and *Piers-Harris Children's Self-Concept Scale* appear to possess positive self-esteem. The data gathered from these assessment tools for both assessment periods were positive for self-esteem. The post-intervention data, in general, has shown an increase. The level of overall self-concept and achievement for the Random Sample Groups are higher than the same areas for the Target Groups except for the Random Sample Group's homework completion rate. The Total Class average scores fall in the area between the Random Sample and Target Groups. The data also indicates that the level of achievement and the level of self-esteem are related. The Random Samples Groups with higher scores on the self-esteem assessments also had a higher level of achievement. The opposite was shown in the data for the Target Groups. This group displayed lower levels of self-esteem and lower

levels of achievement, however, during the intervention period, the Target Group's increase in self-esteem manifested itself in an increase in achievement. This group showed the greatest increase in achievement. They started at a lower level than the Random Sample and Total Class and within the confines of the intervention period displayed marked improvement.

Conclusions and Recommendations

Based on the presentation and analysis of the data for the levels of self-esteem for the fifth grade physical education students and seventh grade science students, the students at both levels showed an increase in self-esteem, resulting in an increase in classroom achievement. Establishing a positive relationship between the student and teacher and fostering positive interactions among peers was accomplished through the use of cooperative learning, specific praise, student/teacher journaling and alteration of the physical classroom environment.

Through the use of cooperative groups, the students practiced social skills which allowed them to interact in a positive way with their peers. A feeling of comfort and support was fostered during group work through peer interactions. The increase in score for the factor of Investing on the Florida Key also supports this. The students are more willing to take risks and volunteer in class because of the support they have experienced through the group interactions. The students enjoyed this interaction as evidenced by statements written in their journals entries to the teacher.

Not only does the grade average data support the fact of increased student academic achievement, but student journal entries reflected a feeling of increased learning. The opportunity to discuss and problem solve with others gave the students a sense

of success and knowledge because they worked together to solve the problem. It is the opinion of the teacher/researchers that cooperative learning definitely had a positive influence on the interactions among peers. This effect of cooperative learning also had an overall positive effect on achievement. It is the conclusion of the teacher/researchers that cooperative learning proved to be a successful intervention strategy as supported by the data gathered in this study.

In the area of specific praise, the teacher/researcher noticed the anticipation with which the students received their graded assignments. Not only did the students' comments focus on the grade, but also on remarks or notations of praise written on their work. These specific positive notations added to the students' positive feelings about themselves. No specific or hard data was recorded to support this observation. A recommendation to consider, if a similar study was to be conducted, would be for the teacher/researcher to either develop a checklist or a journal stem to substantiate the existence of the observed feeling of anticipation.

Journaling developed a line of communication between the student and the teacher/researcher. It ensured that every student had an opportunity to communicate directly with the teacher. During a class period often there is not enough time to address each student individually. Responding to journal entries can be done when the teacher has the time to read and respond to each student. The students expressed their ideas and opinions freely, making criticisms and suggestions concerning class activities and their academic achievements. This information allowed the teacher/researcher to rethink, restructure or discuss with the

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students other options or methods for covering the curriculum or managing the classroom. Student journal entries reflected appreciation for the teacher's consideration of their ideas. This aided in establishing a positive rapport between student and teacher. Support is also shown by the increased score in the results on the Florida Key for the factor of Asserting. The students are more willing to voice their opinion and feel more confident in their interactions with the teacher. The increase in score on the Florida Key in the area of Asserting, and the level of comfort expressed in the journal entries both indicate growth in the area of the student/teacher relationship.

Journal entries are a valuable tool not only in establishing a viable relationship between teacher and students but also in allowing the teacher insight into the students' perspective of the classroom environment. It is the recommendation of the teacher/researcher that journaling be used as a method of enhancing the student/teacher relationship, however, the amount of time necessary to read and respond to each journal entry must be considered during the planning of, and prior to implementation of this strategy.

The physical environment of the classroom was altered to increase the students' feeling of comfort. Signs containing the desired behaviors for cooperative learning and truth signs were posted inside the classroom (Appendix C). Students discussed the meanings and their interpretations of the statements found on these signs. The nature of these signs had an underlying positive effect on the students in fifth grade physical education as well as seventh grade science. This is supported by the teacher/researcher journal entries noting the surfacing of remarks

by the students, reflecting truth sign statements when making connections during peer interactions and classroom discussions. Students felt that these signs were not typical of rule signs found in other classrooms. Their journal entries reflected an appreciation for being treated as young adults rather than being restricted by numerous rules. Classroom discussions initiated by the truth signs indicated the students enjoyed being able to incorporate their ideas into the classroom design. The teacher/researchers conclude that the use of truth and cooperative learning signs is a successful intervention. A physical reminder of the social skills and truths in learning help remind students of appropriate social skills and their implications in fostering a positive climate.

All students in this study made progress. It is the conclusion of the teacher/researchers that although the Target Group's level of achievement never attained the level of achievement of the other two groups, the amount of overall improvement was greater. This conclusion supports the feeling that a student at risk would benefit the most from a program promoting positive self-esteem.

In this study, which set out to promote self-esteem, one major recommendation can be made by the teacher/researcher. When developing an action plan, it is necessary to carefully evaluate the population included in your study. It was the experience of the teacher/researchers in this study that when developing the action plan, the current population and its familiarity be considered instead of the incoming population. A relationship had evolved between the teacher/researchers and the population present at the time of the development of the action plan for the upcoming

school year. This relationship caused the teacher/researchers to make invalid assumptions concerning the population included in the study. For example, the current population has learned the routine followed in class and moves more smoothly through it compared to the incoming population. Establishing the cooperative groups also took more time then expected.

Journal entries proved to be unrealistic for physical education and more time consuming than expected for science, so adjustments were made. The action plan therefore reflected an over-ambitious vision of what could be accomplished during the time allotted for the intervention period. Since time is needed to establish a relationship between the students and the teacher/researcher, an action research plan should allocate adequate time to do so prior to the intervention period.

It is the opinion of the teacher/researchers that the interventions implemented worked to increase self-esteem and achievement for the students involved in the study. The researchers will continue to use these strategies in the classroom to maintain trust and keep the lines of communication open with the students. By continuing the interventions, it is the hope of the teacher/researchers that the positive classroom atmosphere will encourage the students to continue taking risks when willingly participating in classroom activities and advance their levels of academic achievement.

If further research on the topic of self-esteem and achievement is desired, it is the teacher/researchers' suggestion that a longer intervention period be implemented. Although the intervention period has been completed, the interventions are still in place in the researchers' classrooms and the benefits of

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these interventions are still being observed in the student/teacher relationships, peer interactions and achievement. Documentation at the end of an entire year might give further information as to the cumulative effects of the intervention strategies.

Student self-esteem is not always addressed in the curriculum of a school. It is the opinion of the teacher/researchers that it would benefit any school to incorporate a program promoting positive self-esteem. Providing an atmosphere of concern, support and respect will increase students' positive feelings concerning school. Whether the results manifest themselves as achievement increases, as shown in the study, or just allow the student to view the school in a more positive fashion, the school will benefit.

The teacher/researchers did not consider the students to have major problems with self-esteem, based on the pre-intervention assessment data. The strategies discussed and documented in this study were implemented in an effort to determine the impact of these methods on the students' self-esteem and achievement. The students' self-esteem and levels of achievement increased during the intervention period as supported by a comparison of the data presented in this study. It is the opinion of the teacher/researchers that cooperative learning, specific praise, journaling and altering the physical classroom by the use of truth signs and cooperative learning signs enhanced the students' self-esteem and increased their academic achievement in a classroom that was positive and caring.

The benefits of the interventions cannot be fully appreciated by a mere examination of the documented data. A feeling exists in

the teacher/researchers' classrooms that can only be appreciated when observed first hand. The hard data does not show the depth and extent of the peer interactions and teacher/student relationship. A complete understanding of the interventions' success can only be obtained by implementation in the reader's classroom.

References

Alexander, W. M. (1981). The exemplary middle school. New York, NY: CBS College.

Atwell, N. (1987). In the middle: writing, reading, and learning with adolescents. Portsmouth, NH: Boynton/Cook.

Avila, D. L., Combs, A. W., & Purkey, W. W. (1972). The helping relationship. Boston, MA: Boston, Allyn, & Bacon.

Bellanca, J., & Fogarty, R. (1991). Blueprints for thinking in the cooperative classroom. Palatine, IL: IRI/Skylight.

Blyth, D. A., Bulcroft, R., & Simmons, R. G. (1981). The impact of puberty on adolescence: A longitudinal study. Presentation at the Annual Meeting of the American Psychological Association, Los Angles, CA.

Blyth, D. A., & Traeger, C. M. (1983). Theory and Practice. The self-concept & self-esteem of early adolescents, 22 (2), 91-97.

Borich, B. D., & Kash, M. M. (1978). The teacher behavior & pupil self concept. Reading, MS: Addison-Wesley.

Branden, N. (1990, August 9). What is self-esteem?. Paper presented at the First International Conference on Self-Esteem, Oslo, Norway.

Cage, B. N., Fahey, M., & Purkey, W. W. (1973).The Florida Key: An instrument to infer student self-concept as learner in grades one through six. A paper presented at the University of Florida, Gainsville, FL.

Cage, B. N., Graves, W., & Purkey, W. W. (1971, February). The development of a "Pupil Behavior Inventory" to infer learner self-concept. A paper presented at Annual Convention of American Educational Research Association, New York, NY.

Daniels, H., Hype, A., & Zemelman, S. (1993). Best practices: new standards for teaching and learning in American schools. Portsmouth, NH: Heinemann.

Dorrell, L. (1991, October 13). A bridge over troubled water: Rural education and the at risk student. Paper presented at the Annual Convention of the National Rural Education Association, Jackson MS.

Foster, R. D. (1995, December). Internal Affairs. Cooking Light, 9 (9), 34-35.

Glasser, W. (1996, November). The Theory of Choice. Learning, 25, 3.

Harmin, M. (1994). Inspiring active learning: a handbook for teachers. Alexandria, VA: Assoc. For The Supervision and Curriculum Development.

Harris, D. B., & Piers, E. V. (1988). *Piers-Harris Children's Self-Concept Scale.* Los Angeles, CA: Western Psychological Services.

Hedelin, L, & Sjorberg, L. (1985, June). Can we help children stay enthusiastic about school?. Paper presented at the meeting of the European Conference on Learning and Instruction, Leuven, Belgium.

Illinois State School Report Card. (1996). District 85.5, River Grove, Springfield, IL.:Author.

Krupp, J. A. (1992). Self-esteem and the Willingness To Change. In A. Costa, J. Bellanca, & R. Fogarty (EDS). If minds matter (pp. 163-172). Palatine: IRI/Skylight.

O'Brien, S. (1989). For Parents Particularly: How Can I Help My Preadolescent. Childhood Education, 66 (1), 35-36.

Purkey, W. W. (1970). Self-concept and school achievement. Englewood-Cliffs, NJ: Prentice Hall.

River Grove Community Directory. (1995), River Grove, IL.:Author.

Wallin, J. (1982). One hundred ways to improve self-concept. Illinois Renewal Institute, Palatine, IL.

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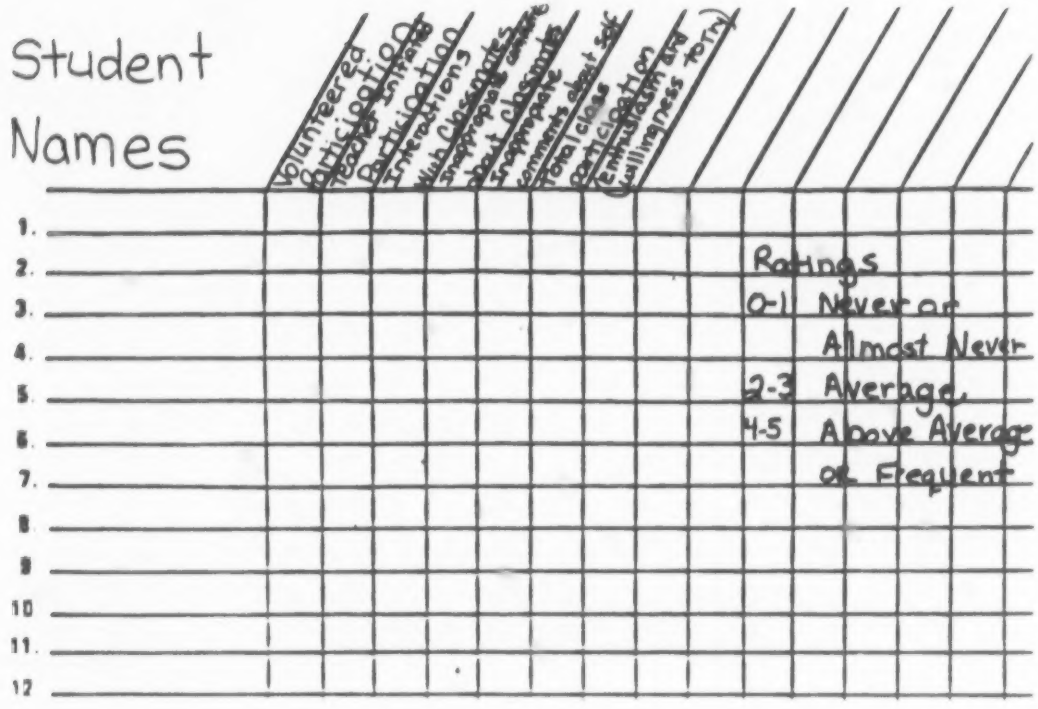
Appendicies

Appendix A

Participation Checklist for Physical Education



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Appendix B

Modified Florida Key

Never: 0	Very Seldom: 1	Once in awhile: 2	Ocassionally: 3	Fairly often: 4	Very often: 5

Name of Student to be Evaluated

R	1.	get along with other students?	___
R	2.	get along with the teacher?	___
R	3.	keep calm when things go wrong?	___
R	4.	say good things about his school?	___
R	5.	tell the truth about his school work?	___
			___
A	6.	speak up for his own ideas?	___
A	7.	offer to speak in front of the class?	___
A	8.	offer to answer questions in class?	___
A	9.	ask meaningful questions in class?	___
			___
C	10.	talk to others about his school work?	___
C	11.	join in school activities?	___
C	12.	finish school work?	___
C	13.	pay attention to class activities?	___
C	14.	do his school work carefully?	___
C	15.	exhibit confidence in his / her schoolwork?	___
C	16.	persist in his / her school endeavors?	___
			___
I	17.	seek out new things to do in school on his own?	___
I	18.	offer to do extra work in school?	___
I	19.	spend time helping others?	___
I	20.	show interest in others work?	___
I	21.	initiate school projects?	___
I	22.	show interest in being a leader?	___
I	23.	talk to teachers about personal concerns?	___
			___

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Appendix C

Classroom Signs

Statements for truth signs:

Everyone needs time to think and learn.

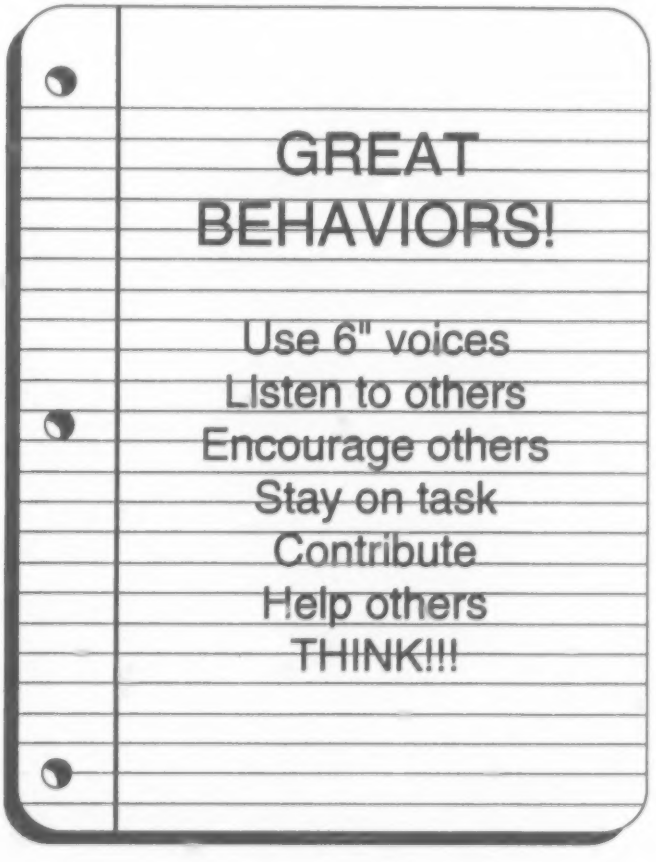
We each learn in our own way.

The hardest part of any job can be finishing it.

It's okay to make mistake. It's one of the ways we learn (Harmin, 1994)

You're not finished when you lose. You're finished when you quit.

Cooperative learning behavior signs:



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